SM 1. Full results from quantitative and qualitative methods of short-term earthquake recovery dynamics by topic. Quantitative analytic methods include non-metric multidimensional scaling (NMDS) ordination and descriptive statistics; qualitative methods include content analysis. Data inputs for the NMDS are from a household survey conducted at 9 months (phase 1) and 1.5 years (phase 2) after the earthquakes (n=400; n=397). Data inputs for the content analysis include the household survey (n=400, n=397), in-depth interviews at phase 1 (n=40), focus groups at phase 2 (n=8), and research return workshops at 2.5 years (n=8). All locations mentioned were Village Development Committees (VDCs) as of January 2016 and not individual settlements.

<table>
<thead>
<tr>
<th>Key topics</th>
<th>Quantitative results</th>
<th>Qualitative content analysis results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inequality</td>
<td></td>
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<tr>
<td></td>
<td>Households in Haku and camps, Buddhists, and households from the Tamang ethnic group were struggling the most.</td>
<td>Various tangible and intangible recovery dynamics bring to the forefront social inequalities that existed prior to the earthquakes; poor and geographically marginal experienced the worst earthquake impacts.</td>
</tr>
<tr>
<td></td>
<td>Households from Aaru Chanaute, Hindus, and Newar, Brahmin, Chettri, other ethnic groups, and those that took microcredit loans had the best recovery outcomes.</td>
<td>Households perceive problems in accountability and transparency in government and NGO aid distribution.</td>
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<tr>
<td></td>
<td>Households from Kashigaun, home owners, and larger household sizes were able to return to their homes and adapt their agropastoral practices the fastest.</td>
<td>Local governments felt that they had a lack of understanding of national government reconstruction policies and processes.</td>
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<td></td>
<td>Households in camps and temporary shelters were having difficulty adapting their agropastoral practices.</td>
<td>Historically marginalized ethnic groups, such as Tamang and Dalit, shared that they lacked a voice in government actions due to knowledge gaps.</td>
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<td>Households headed by males were less displaced than female headed households; household heads with an education level between class 5-10 had some better recovery outcomes.</td>
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<td>Households with higher literacy were having better recovery outcomes, but less strong than other demographics.</td>
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<td></td>
<td>Joint families, single families, and age of household head did not correlate with recovery outcomes.</td>
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<tr>
<td>Spatial inequalities</td>
<td>Accessible households had less displacement and had an easier time adapting and restarting their agropastoral practices.</td>
<td>Inaccessible households and settlements lacked access to relief and recovery materials and programs.</td>
</tr>
<tr>
<td></td>
<td>Households in inaccessible settlements mostly took loans from family and friends for reconstruction; those in accessible settlements primarily took bank and microcredit loans; some felt the government should forgive loans.</td>
<td>Government and aid community’s perceptions of the condition of inaccessible settlements were assessed based on the condition of accessible settlements.</td>
</tr>
<tr>
<td></td>
<td>Kashigaun was heading in a positive direction at phase 2, Gatlang in a negative direction, and Aaru Chanaute and Haku remained relatively stagnant.</td>
<td>Households perceived that government and aid community biased relief and recovery materials and programs towards charismatic tourist sites, such as Langtang.</td>
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<tr>
<td></td>
<td>All settlements made strides to return to their place-based livelihoods at phase 2.</td>
<td>Road condition affected access to relief and recovery materials and programs.</td>
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<td></td>
<td>Variables primarily functioned non-linearly, with distinct negative recovery outcomes for households that remained in their villages and those displaced to camps.</td>
<td>Distance from the road head influenced rebuilding expenses, especially transportation costs for sand, cement, and rebar.</td>
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<td></td>
<td>Differences existed in severity of landslides and impacts on livestock survival, health, behavior, and productivity.</td>
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<tr>
<td>Hazard exposure, livelihood, and displacement</td>
<td>Hazard exposure</td>
<td>Place-based livelihood disruption</td>
</tr>
<tr>
<td>---------------------------------------------</td>
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<tr>
<td>Households with impeded access to grazing areas, firewood collection, forest product harvest, <em>bari</em> (non-irrigated) fields, and threats from landslides had the most negative recovery outcome.</td>
<td>Households and settlements were impacted by landslides across both phases.</td>
<td>Timber harvest to rebuild houses degraded certain local forests.</td>
</tr>
<tr>
<td>Households with impeded access to grazing areas, firewood collection, forest product harvest, <em>bari</em> (non-irrigated) fields, and threats from landslides appeared to have worse recovery outcomes in phase 2.</td>
<td>Households were being prevented from returning to their agropastoral practices because of landslide threat.</td>
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<tr>
<td>Households with greater exposure to these hazards experienced difficulties in recovery across both phases; landslide risk and difficulties farming and herding increased in phase 2.</td>
<td>Households perceived danger in returning to pastures, fields, and forests due to extreme earthquake impacts, such as those covered by landslides.</td>
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<tr>
<td>Households and communities with previous natural hazard experience returned to their primary homes and restarted their agropastoral practice faster.</td>
<td>Households that remained in temporary shelters and camps were being exposed to new and existing hazards, such as windstorms and reactivated landslides.</td>
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<tr>
<td>Households whose livelihoods focus on livestock (bovines, sheep/goats/pigs) and <em>bari</em> agriculture were struggling the most.</td>
<td>Herders, non-irrigated field <em>bari</em> farmers, and forest product harvesters had the most extreme impacts on their livelihoods across both phases, in part through continued hazard exposure.</td>
<td></td>
</tr>
<tr>
<td>Households with <em>khet</em> agriculture and those that participated in businesses and tourism ventures instead of agropastoralism had better recovery outcomes (contained non-linear association similar to demographics).</td>
<td>Livestock had health and productivity issues.</td>
<td></td>
</tr>
<tr>
<td>Households that were able to return to their homes and restart their agropastoral practice had distinct outcomes from those that continued to struggle with displacement in temporary shelters and camps.</td>
<td>Households lost or changed their livelihood because of the expense in restarting after mitigating earthquake impacts.</td>
<td></td>
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<tr>
<td>Households that owned livestock at phase 2 returned to herding faster and households were purchasing more low cost chickens than other more expensive livestock to replace what they lost.</td>
<td>Households that lacked diversity in their livelihood had more negative outcomes due to reliance on one modality with catastrophic impacts, such as herding and forest product harvest.</td>
<td></td>
</tr>
<tr>
<td>Households utilized local knowledge of farming and pasture management in phase 1.</td>
<td>Household labor issues included an inability to find farmers and herders who practice <em>parma</em> (to provide reciprocal labor.</td>
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<td></td>
<td>Households that relied on breaking stones and gravel mining in the Budi Gandaki dam inundation zone were concerned that they may lose their livelihoods.</td>
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<td></td>
<td>Households lacked access to capital to start new businesses and had difficulty maintaining prior businesses.</td>
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<td></td>
<td>Households felt that earthquakes reversed development progress.</td>
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<td></td>
<td>Households had their agropastoral livelihoods and entire settlements displaced.</td>
<td></td>
</tr>
</tbody>
</table>
### Displacement

<table>
<thead>
<tr>
<th>Lack of flow of new ideas in the camps across both phases.</th>
<th>Households displaced in their settlements and camps felt that they were living as outsiders in “other’s places” and were often forced to pay rent.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Households in camps were having trouble adjusting to agropastoralism at lower altitudes and some elected to use pesticides to quicken yields; others unable to farm were conducting poorly compensated wage labor.</td>
<td>Households in camps were having issues with raising children, procuring healthy food, and privacy.</td>
</tr>
<tr>
<td>Households being resettled from the camps and the dam inundation zone wanted to be relocated together to continue to practice their culture.</td>
<td>Certain households wanted to be relocated near their previous settlements to continue to practice place-based cultural traditions, such as communal blessings and cremations at funerals.</td>
</tr>
</tbody>
</table>

### Place attachment, uncertainty, and mental well-being

<table>
<thead>
<tr>
<th>Place attachment</th>
<th>Place attachment</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>Households had strong place attachment to their physical homes and ancestral settlements; destruction thereof influenced negative mental well-being through daily re-traumatization.</td>
</tr>
<tr>
<td>   </td>
<td>Newar households in Aarughat (Aaru Chanaute) had strong place attachment to the dam inundation zone.</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Uncertainty towards the future</th>
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</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>Households perceived the future as highly uncertain in all settlements, camps, and planned dam inundation zone, influencing mental health.</td>
</tr>
<tr>
<td> </td>
<td>Newar households in Aarughat (Aaru Chanaute) had uncertainty related to their resettlement due to the dam.</td>
</tr>
</tbody>
</table>

### Mental well-being

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>New social constructions of dukkha (trouble/tension) and pagal (a mad person) emerged during recovery.</td>
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<td> </td>
<td>Certain ethnic groups and religions of varying socio-economic statutes worked together and lived more in harmony in the short-term.</td>
</tr>
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<td> </td>
<td>Kashigaun and Aaru Chanaute households pooled government relief funds to provide food and basic shelter materials to all households over the short-term; both settlements traditionally practice forms of work exchange.</td>
</tr>
<tr>
<td> </td>
<td>Households cooperated in the recovery to help the most marginal, such as the elderly and children.</td>
</tr>
</tbody>
</table>