



Shangrila orphanage



Govinda Entwicklungshilfe e. V. / Germany



Shangrila Entwicklungshilfe e. V. / Switzerland



Shangri-La Reconstruction and Development Project

Evaluation Report

SRDP Evaluation Team
October 12th, 2016



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1. Meta Information

Project	Shangri-La Reconstruction and Development Project
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Responsible Evaluation Board	Neeta Shahi (Chairperson SOH), Sunil Lama (General Manager SOH), Jay Shankar Upadhyay (Chairperson SDA) , Rocco Umbescheidt (Chairperson GDAA)
Supporting Organisations	SOH - Shangri-La Orphanage Home, Lalitpur, Nepal SDA - Shangri-La Development Association, Makwanpur/Lalitpur, Nepal GDAA - Govinda Development Aid Association, Aalen, Germany Shangri-La Development Aid Association, Zurich, Switzerland Usthi Foundation, Zurich, Switzerland (till 31 st of May 2016)
Locations	Lalitpur district and Makwanpur district, Nepal
Implementation period	12 th Mai 2015 to 10 th August 2016
Evaluation period	16 th August to 10 th October 2016

SRDP construction formats, management tools etc. are at free disposal provided if SRDP is named.

Organisations are encouraged to contact for further information:

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2. Summary

Target: Construction of earthquake-resistant houses of good quality that minimise future risk of damage, which are built by communities with higher capacity to rebuilt better and safer houses, 34 in the district of Makwanpur, 56 in the district of Lalitpur

Achieved target: Construction of earthquake-resistant houses of good quality that minimise future risk of damage, which are built by communities with higher capacity to rebuilt better and safer houses, 34 in the district of Makwanpur, 56 in the district of Lalitpur

Relevance is high. Policies, priorities and needs are addressed. Beneficiaries of housing reconstruction belong to the vulnerable households. The logical framework is consistent with the objectives and approach set out in the description.

Efficiency is good, there is some scope for improvement in planning and implementation.

Effectiveness: The project is reaching its objectives in house construction within the time frame of the cooperation contract. The long-term impact is too early to assess.

Sustainability is excellent for the houses, especially as SOH/SDA/ Govinda - Germany and Shangri-La-Switzerland are continuously involved in both areas, thus maintenance is facilitated.

Overall, the assessment is positive and is based on a log-frame as well as document reviews, focus group discussions and key informant interviews.



"We wouldn't have been able to build a new house because of our economic problems, if Shangri-La had not built the house, we would have to live in a tent, tarpaulin shelter or cowshed."

Nar Bahadur Praja, Dhusrang (Makwanpur)

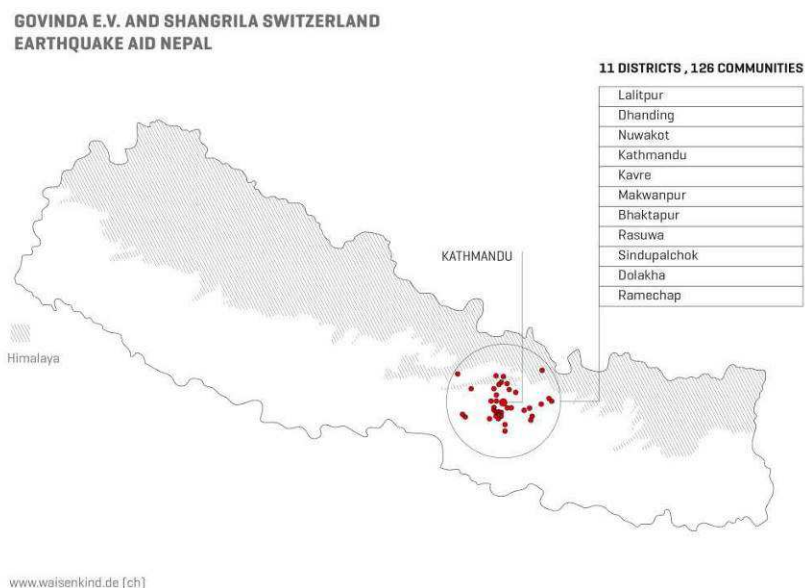
3. Introduction

In Nepal, on 25 April 2015 at 11:56 local time an earthquake measuring 7.8 on the Richter scale took over 8,000 human lives¹, made hundreds of thousands people homeless and inflicted substantial damage to infrastructure. A second earthquake with 7.2 on the Richter scale happened on May 12. Aftershocks occurred for months and the risk of landslides was very high. Conditions were aggravated by the political blockade of the border to India and the bureaucratization of assistance by the government.

Immediately after the earthquake the Shangri-La Reconstruction and Development Project (SRDP) was started by:

- Govinda Development Aid Association (GDAA), Aalen, Germany
- Shangri-La Development Aid Association, Zurich, Switzerland
- Usthi Foundation, Zurich, Switzerland
- Shangri-La Development Association (SDA), Makwanpur/Lalitpur, Nepal
- Shangri-La Orphanage Home (SOH), Lalitpur, Nepal

Parallel to the establishment of SRDP emergency aid activities were conducted in 11 of the 14 most affected districts of Nepal with 55 tons of relief supplies which reached 126 communities and 36,414 people within one month. Monsoon aid support was given to more than 5,000 people, consisting in temporary accommodation, temporary learning centres for 2,500 schoolchildren, hygiene training for more than 600 people as well as medical care.



Target areas of SRDP for reconstruction were **Makwanpur district** (Kalikatar and Bharta VDCs) and **Lalitpur district**. The choice of the two locations was due to the fact that SOH/SIS is located in Lalitpur district, and SDA's target region the VDCs of Kalikatar and Bharta in Makwanpur district.

In the Kalikatar and Bharta VDCs of Makwanpur, only one life was lost, but 313 private houses were damaged (in total there are 796 households in Kalikatar and 693 households in Bharta), and 13 school building were destroyed.² In Lalitpur district 17,444 private houses were fully destroyed and 8064

¹ To be exact, many of those lives were lost due to disregard of building codes and urban planning norms.

² Community Research and Training Center (CRTC): PRA Report of Kalikatar and Bharta in Makwanpur, Nepal, Kathmandu, 2015

private houses were partially damaged, there were 180 human casualties, and 149 of 200 government schools were destroyed³.

In 2011 Kalikatar VDC's population was 4723 (2384 male, 2339 female), Bharta VDC's 4169 (2143 male, 2026 female)⁴. The VDCs are situated in the hill region, with a majority of Chepong people who mostly live in scattered settlements. This settlement pattern causes walking distances to schools, health posts (one in each VDC), police station (one in Kalikatar village) and retail shops that sell basic goods (several in Kalikatar and Bharta villages) of 1.5 hours on average, along narrow, steep trails. The main occupation is subsistence farming with crops (mainly maize and millet) lasting on average for only six months. Forest resource collection livestock rearing and small scale fishing supplement nutrition, but seasonal migration for wage labour is customary. Full food self-sufficiency is rare. Kalikatar village is connected by an earthen road from via Namtar to Tribhuvan Highway (Chuniya), and by a seasonal road along/through Kalikhola river to Manahari (October to May). The latter road is served by public transport once a day.

The Tibeto-Burman ethnic group of the Chepong, until a few generations ago semi-nomadic hunters and gatherers, have been called "the poorest of Nepal's poor"⁵. They number around 52,000 and the majority lives in the districts of Dhading, Chitwan, Gorkha and Makwanpur. Adult illiteracy, malnutrition, alcoholism, exploitation and discrimination characterise their living conditions as well as lack of food security and lack of resource ownership and even citizenship certificates⁶. 28 of SRDP Makwanpur's 34 beneficiaries are Chepong (while the few others are Tamang and Dalit).

In Lalitpur district the situation is a completely different one. Infrastructure and accessibility facilitate overall conditions for its 468,132 inhabitants. The diversity of the Kathmandu valley's inhabitants is mirrored by SRDP Lalitpur's group of beneficiaries whose only common denominator is their fragile economic situation. Bahun, Chhetri, ethnic groups (such as Newar, Tamang), Dalit - all are represented. The houses are located in the municipalities of Bajrabarahi, Karyabinayak and Godawari (formerly the VDCs Lele, Chapagaon and Chhampi), on the southern edge of the Kathmandu valley. Contrary to the Makwanpur building sites, all houses have road access in LP.

4. Concept and Methodology

The overall purpose of this evaluation is to assess the extent to which the Shangri-La Reconstruction Development Project has started bringing the anticipated project outcomes, to examine which factors have proved critical in helping or hindering and to draw lessons for future programming. The main objectives of the evaluation were to:

- Evaluate the output / outcomes and impact of the SRDP project against its objectives and four project dimensions (management, social, financial and technical dimension).
- Assess the core project structures, methodologies and capacity development.
- Evaluate the project partnership approach (including management structures, communications and relationships) to community implementation, research and advocacy in relation to the project's achievements.
- Analyze the project's financial management and value for money.
- There is a special focus on generating motivation and best practices for further projects, pointing out positive impacts as well as lessons learned.

³ Ministry of Home Affairs (MoHA), Government of Nepal: Nepal Earthquake 2015. Disaster Recovery and Reconstruction Information Platform, <http://drrportal.gov.np>

⁴ Central Bureau of Statistics, Government of Nepal: 2011 National Population and Housing Census, Kathmandu 2011

⁵ Beine, David / Caughley, Ross / Shrestha, Dwarika: Chepong - then and now. Live and Change among the Chepong of Nepal, Blurb Books 2012

⁶ Bista, Dor Bahadur: People of Nepal, Kathmandu 1996; Maharjan, Keshav Lall / Piya, Luni / Joshi, Niraj Prakash: Annual Subsistence Cycle of the Chepongs in Mid-Hills of Nepal, in: Himalayan Journal of Sociology & Anthropology-Vol. IV, 2010

The evaluation is not just carried out to demonstrate the project's success to its stakeholders and to check if its activities and results correspond with targets and impact, but an important aspect is to establish a dialogue and a mechanism for feedback between project staff and beneficiaries. This cannot be achieved without the participation of the target group. From the beginning participation of the community was part of the planning process and then the project's implementation as the project was based on ODHR approach, the community was never merely regarded as an object. Members of the community profit from the project, but not just as mere consumers, active involvement is a central part. Another aspect is to initiate a learning process about social reality - and the need to change it. The evaluation is not concluded with this report, it is an on-going process - further results and impacts will emerge, as the project is embedded in SOH/SDA's continuing involvement in the two regions. An example for a long-term target is the improvement of the health situation especially of women due to the smoke-free stoves installed in the houses. Questions of maintenance of the houses have to be monitored in the future.

METHODOLOGY

SRDP decided for an internal evaluation for different reasons. A major factor is the internal evaluation's participative approach. As participation of the target group in planning and implementation is the centre of an ODHR project it concludes that the evaluation should not be carried out with an un-participatory approach.

For NGOs with low administrative costs and high honorary contributions the lower costs of an internal evaluation are another important factor.

A risk of an external evaluation is that mistakes and shortcomings will often be hidden by staff to present a better picture. Staff are often defensive about challenges faced as the evaluator is seen as an outsider and an intruder and the evaluation is regarded as a means of domination, especially as the evaluation process is intransparent and results are kept secret until the final report is published. An internal evaluation is less of a threat, it is less disruptive and causes less anxiety among staff.

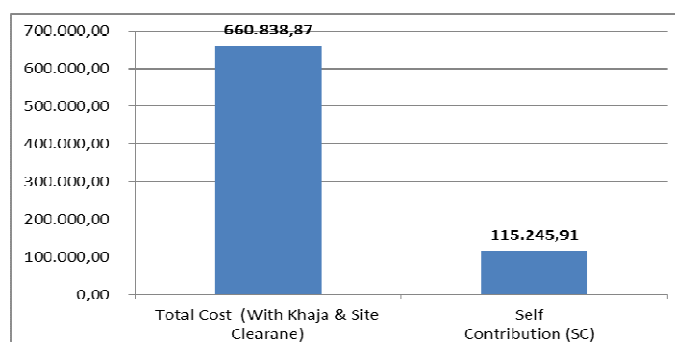
Every internal evaluation carries the risk of not being objective. To counterbalance this risk a triangulation of methods is the core of the evaluation process. Next to a desk-based document review of project data, focus group interviews with beneficiaries have been carried out as well as key informant interviews. The methods applied to conduct the evaluation was to get the information from different stakeholders including but not limited to house-owners, focus groups, local governing authorities and project staffs to find out the experience of the stakeholders before, during and after the completion of the project

This evaluation has been conducted between 16 August and September 30, 2016 and includes following methodology and participants:

Part	Method	Description
I	Desk-based document review	Document main areas of review against the areas of review / evaluation questions and key data extracted (meeting minutes, construction stage reports, house completion reports, field reports, house log files, house log books)
II	Key informant interviews	Online survey (open and closed questions) participants: SRDP Team & Consultants (team members who have been employed throughout the project period November - August)
III	Focus group discussions	Semi-structured interview guide participants: house owners in Makwanpur and Lalitpur

5. Financing

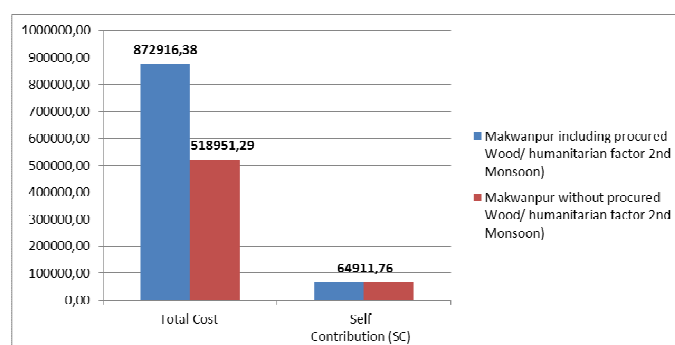
A) House Costs and Self Contribution Lalitpur (in NRs)



Total number of houses in Lalitpur: 56

	House Costs and Self Contribution Lalitpur
House Costs in Euro without SC (1:115)	4744,29
Total House costs in Swiss Francs without SC (1:105)	5196,12
Average SC including related costs ⁷	17,44%

B) Average House Costs and Self Contribution in Makwanpur (NRs)



Total number of houses in Makwanpur: 34

	Makwanpur House Costs including procured Wood	Makwanpur House Costs excluding procured Wood
Total Costs in Euro without SC (1:115)	7026,13	3948,17
Total House costs in Swiss Francs without SC (1:105)	7695,28	4324,19 ⁸
Average SC including related costs	7.44%	12.51%

C) Contribution from Project Partners (Finance and Work of Honorary Experts GDAA/SA)

Description	Amount (NRs)	% of Total Cost	In Euro	In CHF
Govinda – Germany/ Shangrila Switzerland & SOH other Projects & Interest Income	67.228.601,80	51,73%	584.596,54	640.272,40
Honorary Experts from Govinda – Germany & Shangrila Switzerland within 18 Months (1 Lawyer, 4 Engineers, 1 Project Manager)	42.090.000,00	32,38% ⁹	366.000,00	400.857,14
Usthi Foundation/Switzerland & Interest Income	20.650.235,68	15,89%	179.567,27	196.668,91
Total	129.968.837,48	100 %	1.130.163,80	1.237.798,45

⁷ Related Cost are the incidental costs related to construction work such as providing food, breakfast to workers, site clearance and other minor costs.

⁸ Humanitarian Board decision to procure external wood to give the families a safe shelter before the second monsoon.

⁹ Project Expenditure reduced by honorary & professional work of Govinda/ Shangrila Experts by 32.38%. Direct Payments to 9 Nepalese Supervisors / Team Leaders and Project coordinators of Govinda- Germany/ Shangrila- Switzerland and 2 Project coordinators of Usthi Foundation- Switzerland not included. Head Office staff and honorary action groups of all three European organizations not included.

D) Contributions from Project Partners (Fund based)

Description	Amount (NRs)	% of Total Cost	In Euro	In CHF
Govinda – Germany/ Shangrila Switzerland & SOH other Projects & Interest Income	67.228.601,80	76,50%	584.596,54	640.272,40
Usthi Foundation/Switzerland & Interest Income	20.650.235,68	23,50%	179.567,27	196.668,91
Total	87.878.837,48	100%	764.163,80	836.941,31

E) Admin & Programme Expenditures

Description	Amount (NRs)	% of Total Cost
Admin Costs	5.325.415,04	6,06%
Programme Costs	82.553.422,44	93,94%
Total	87.878.837,48	100%

6. Valorisation

1.1. Products

- End of project evaluation report

1.2. Dissemination and exploitation of results

The purpose of dissemination is to raise awareness for the ODHR process and inform about implementation, risks, and lessons learned - or, in general terms, larger sustainability. Effective and sustainable dissemination of knowledge among and beyond the project's stakeholders (during and beyond the life time of the project) will be realized through various channels.

In particular, to communicate the project's results the following dissemination tools are being implemented:

- websites (www.waisenkind.de / www.waisenkind.ch) and social media
- press releases
- newsletters
- public lectures
- short films
- fundraising events
- TV and radio interviews

Key target groups are donors and other stakeholders as well as ODHR implementers, staff of development organizations and well as the interested public.

7. Preparation

7.1 Assessment

In June 2015 an assessment was undertaken in both affected areas and the following data concerning possible beneficiaries was collected and entered in the project database, the so-called house log file:

name, family size, profession, age, landownership status, social status, economic situation, health status, caste/ethnic background, location of house, condition of affected house (incl. details about damage), temporary shelter plan, sanitary condition (toilet, drinking water), type of soil, availability of construction materials, analysis of reusable materials, road access, forest location, support by other organisations, skill / manpower availability, and other remarks. Additionally, photos of potential beneficiaries and their damaged houses were taken.

In Lalitpur district, due to the high number of destroyed houses, as a primary selection criterion at least one child of the beneficiary's family had to be one of Shangri-La International School's 240 scholarship students. All 240 families were assessed.

In Makwanpur, SRDP's supporting organisation SDA had conducted a need assessment through participatory rural appraisal as well as a baseline survey around the time of the earthquake, and in June 71 households were assessed. The primary selection criterion was that the family's house was damaged or fully destroyed by the earthquake.



In the key informant interview conducted in September 2016, most of the participants found that the data collection for initial assessment was sufficient while it was not sufficient in some points which were later on identified during the field work.

7.2 Selection

Apart from earthquake victim as primary criterion, the following criteria were applied to select households:

- **economic indicators:** income, property, ranking of poverty level
- **social indicators:** individual status: orphan, major disease, disability
family status: single-headed family, large family size, no joint family support
caste / ethnic status: marginalised, Dalit

An additional requirement for Makwanpur was the inheritance status: there had to be an obvious heir to inherit the house (i.e. no childless elder couples).

Furthermore, because of time pressure (the next rainy season), the ability provide all documents on time was requested (citizenship certificates, landownership titles) - assistance to do so was offered by SRDP. See 7.3.

The terms *beneficiary* and *house owner (HO)* are used in now reference to those whose houses we built or support for their shelter was provided by SRDP.

In Lalitpur district, 75 households were selected according to the above listed indicators, 15 of those on a waiting list. In the following weeks, despite extensive support, 19 cases had to be rejected because they were not able to produce the necessary documents (partly due to an unwillingness to go through the bureaucratic process of the government, the impossibility to find proof for ownership, mortgaged land). Thus 56 households were selected in Lalitpur district. The drop-out cases received support in form of materials such as tarpaulin, as well as advice where to get further support to improve their houses.

As all selected Lalitpur households had one child supported by a scholarship to Shangri-La International School, those children became - despite being underage - the official house owners, to secure their future. Of the 56 beneficiaries 8 are Dalit (14,3%), 26 belong to ethnic groups (Tamang, Newar, Magar)(46,4%), and 22 are Bahun or Chhetri (39,3%).

In Makwanpur district, 36 households were selected according to the above mentioned indicators. Out of those beneficiaries, two were not actively participating. Despite many attempts by the project, the beneficiaries were not willing to get the legal documents for land, active participation in the reconstruction process and adhering with the social philosophy of the project as a result of which they were dropped and were still benefitted with some support such as tarpaulin as well as advice where to get further support to improve their shelter Two House owner's houses were repaired and maintained by SDA supported by independent funds of Govinda/ Germany and Shangrila Switzerland. One old couple having no children and the next had lost his landownership certificate in fire.

Of the remaining 34 house owners, 28 are Chepang (82,3%), four are Tamang (11,8%) and two are Dalit (5,9%).

The lists of beneficiaries were confirmed to local authorities. Throughout the project's assessment, planning and implementation phases there was close cooperation with local authorities and stakeholder through formation of Reconstruction Development Committees (RDCs)- this was also confirmed by most of the key informant interviewees.

A Memorandum of Understanding (MOU) / Agreement with beneficiaries where roles and responsibilities was done with the beneficiaries so that they understand the requirements, expectations, time frame and philosophy of the project and how the work is carried out smoothly.

Organisational structures were established, HOs were divided into construction groups according to geographic proximity, so-called clusters, named after wards in the case of Lalitpur, named after names of hills in the case of Makwanpur. Each construction group/cluster comprised three to ten beneficiaries, who received individual house numbers.

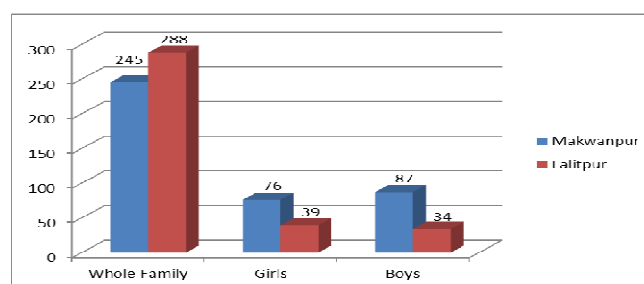
Lalitpur

Construction group 1: (Chapagaun) 7	L01.20 Suraj R. , L01.54 Kamal S., L01.29 Sanjivini K., L01.25 Paras G., L01.37 Laxmi M., L01.21 Shristi M., L01.59 Nirjal M.
Construction group 2: (Muldole and Jhaluntar) 6	L02.36 Raj P., L02.13 Saiendra P., L02.28 Uma T., L02.14 Prashant R., L02.11 Chandra M., L02.1 Nishan C.
Construction group 3: (Salyan) 9	L03.41 Jenisha T., L03.33 Kripa T., L03.53 Nisha T., L03.69 Sujita K., L03.23 Aditya K., L03.48 Yogesh S., L03.75 Ashwini K., L03.51 Amrit P., L03.10 Kishor T.
Construction group 4: (Boharatar and Dandagaun) 9	L04.38 Karuna K., L04.67 Rabindra B., L04.9 Swikriti T., L04.79 Aryan S., L04.42 Sanjay K., L04.70 Maya D., L04.32 Priyanka R., L04.55 Anup B., L04.12 Anusha N.
Construction group 5: (Lele) 7	L05.24 Samir S., L05.18 Deepika M., L05.4 Dipen S., L05.6 Tanka P., L05.62 Manju N., L05.78 Sagar M., L05.3 Kanchan P.
Construction group 6: (Pahadegaun) 9	L06.30 Bijaya N., L06.27 Junu N., L06.35 Ujjawal N., L06.46 Suresh N., L06.16 Deepa N., L06.7 Nabina T., L06.5 Anish K., L06.26 Sidita K., L06.5 Sajana N.
Construction group 7: (Champi and Charghare) 9	L07.73 Jay K., L07.71 Sudeep K., L07.49 Sarita D., L07.19 Devi N., L07.74 Nabina K., L07.39 Jyoti T., L07.34 Supriya T., L07.43 Jessica T., L07.31 Sanish T.

Makwanpur

Construction group 1: (Kalikatar) 8	M01.28 Dambar B., M01.29, Rikhiram P., M01.30 Ram M., M01.31 Ram K., M01.32 Sano K., M01.33 Thulo K., M01.34 Dipendra C., M01.35 Singha B.
Construction group 2: (Ghodame) 4	M02.1 Iman S., M02.2 Santa B., M02.3 Purna S., M02.4 Navraj S.
Construction group 3: (Dekhari) 3	M03.6 Lila B., M03.7 Namraj C., M03.8 Nar B .
Construction group 4: (Sarsi) 6	M04.9 Bir B., M04.10 Ram K., M04.11 Thuli M., M04.12 Mohan S., M04.13 Chandra B., M04.14 Durga B.
Construction group 5: (Dhusrang) 10	M05.15 Gane P., M05.16 Pratap S., M05.17 Shiva P., M05.18 Aita R., M05.19 Jhalak B., M05.20 Jangilal P., M05.21 Iman S., M05.22 Nar B., M05.23 Ratna B., M05.24 Krishna B.
Construction group 6: (Deutis) 3	M06.25 Karma S., M06.26 Kanchi M., M06.27 Khemraj .P

533 SRDP Beneficiaries¹⁰



¹⁰ Whole Families of HO. 3 homeowners who were originally selected in Lalitpur and have been later separated due to missing documents as well as time factors, received special support. They are included in the data.

7.3 Legal issues: land rights

After the planning stage was completed, before construction could start, formalities of landownership had to be settled. No house was built without the house owner being in possession of proper landownership papers. SRDP staff liaised with government institutions to support beneficiaries through the process. In many cases citizenship certificates had to be applied for, lost documents had to be obtained and property rights disputes had to be solved, before construction work could be started.

For members of the Chepang ethnic group in Kalikatar and Bharta VDCs this issue has no precedence. Lack of resource ownership characterizes the living conditions of the Chepang (82% of the Makwanpur beneficiaries), thus the acquisition of landownership rights for 53 people (most of them Chepang) is of historic significance.

Acquiring landownership rights for one person required on average one man day of assistance of SRDP staff. For a name list of recipients of landownership rights see appendix.

7.4 Special cases

For several beneficiaries there were certain barriers, of a social or cultural kind, to full involvement. Lalitpur: Deepika M., Samir S., Uma T., Kamal S., Suresh N., Saiendra P., Nishan C., Prashant R., Sarita D. Makwanpur: Renuka C. (widow of HO Dipendra C. who passed away during the implementation process due to late complications of brain haemorrhage), Navraj S.

To make participation in the project possible, those special cases were clearly identified, their needs were assessed by team and board members and they were closely accompanied during the reconstruction. They received special support according to their needs. Participation of those most vulnerable beneficiaries was made possible in the first place through a lowered self-contribution. They contributed by monitoring of the labourers and coordinated in construction process with their best possible effort. The project provided the unskilled labour force to such beneficiaries. Vulnerable house owners were characterised by one or more of the following criteria's: single-parent household, disability, illness - in combination with extreme poverty.

8. Planning

8.1 House design

Identification of construction consultancy companies was initiated during July 2015, and the interested companies were required to submit the plans and concepts based on 18 criteria. Among the identified companies responses were received from Minergy Pvt. Ltd, Ecotech Building Systems Pvt. Ltd, Bonafide Engineering Consultancy Pvt. Ltd, Tech Studio of Engineering and Bamboo Nepal in the initial phase.

Following, the selection of the companies based on different dimensions i.e., quality of house designs, cost effectiveness, complexity of the execution plan and availability of the team of consultants, finally two companies were selected for the construction supervision work.

Ecotech Building Systems Pvt. Ltd. was selected for Lalitpur district and Bonafide Engineering Consultancy Pvt. Ltd was selected for Makwanpur district.

Afterwards and throughout the next six months construction and execution plans were designed in close cooperation between Nepalese and German architecture teams while in both districts house owners were included in decisions.

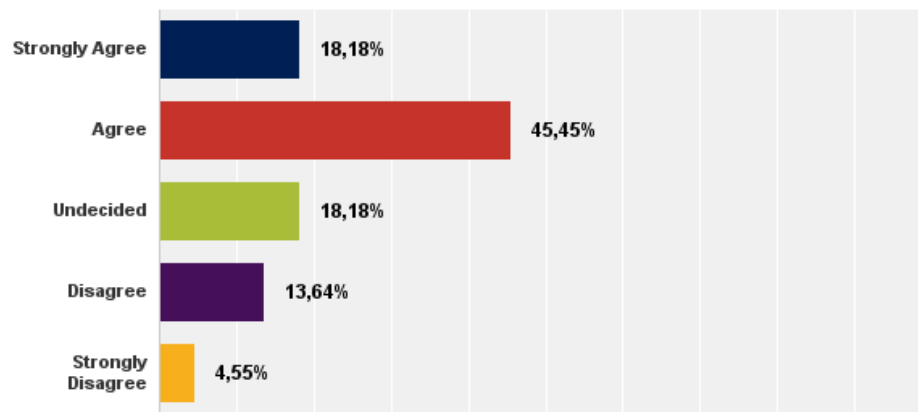
The basic requirements for the house design were:

- Consideration of the traditional design and flexibility to adjust according to the beneficiaries' needs and demands
- Materials (locally available)
- Realization and cost effectiveness in construction and operation
- Structure
- Energetic concept
- Water supply and drainage
- Architectural and functional quality
- Technical requirements (earthquake resistant technologies and monitoring)
- Logistics/Procurement and supply of materials
- Skill training
- Health and sanitation (Ecosan-toilet and smokeless cooking stove)
- Owner driven housing reconstruction approach (ODHR)
- Cash/ voucher/ material support
- Temperature / circulation
- Financial limitation
- Time frame
- Supervision and monitoring mechanisms
- Total concept (how coherent is the overall concept?)

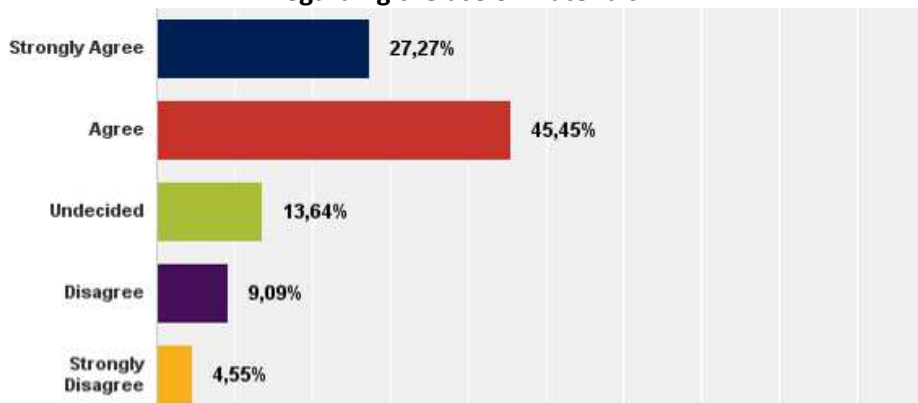
Opinion of Key Informants

Regarding the House Design

When asked whether the building / house design can easily be reproduced by locals, the participants of the key informant interview, conducted in September 2016, answered as presented in the following chart:

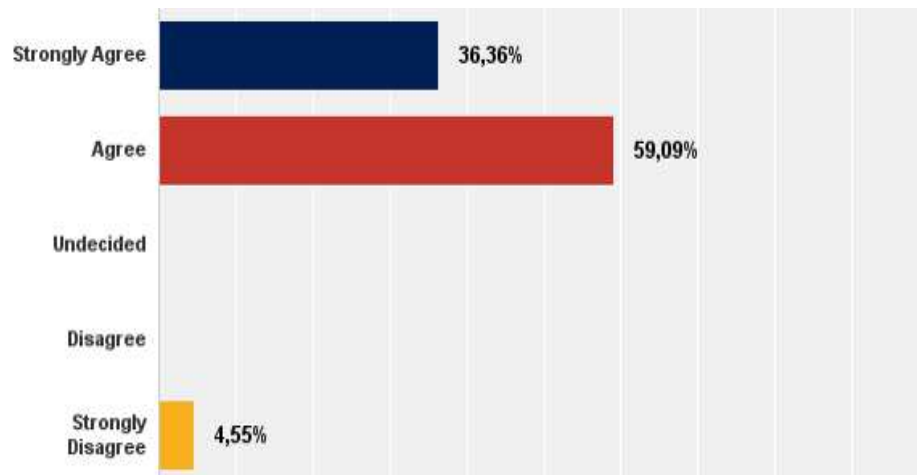


Regarding the use of materials



Regarding Compliance with National Standards, Rules & Regulations

The project has complied with national standards, rules and regulations and the same has also been further indicated by the survey as 95% of the respondents agreed to the same. The same has been reflected in the chart below:



Lalitpur house design: Brick and RCC Design

Initially the design for Lalitpur houses was based on interlocking brick technology with several advantages, but because of the bureaucratic processes in the government, an approval was impossible. All plans were therefore re-developed and a house design by the government was taken. It has two rooms and a CGI roof. Cement bricks were chosen because they are more environment-friendly (less pollution during production), are bigger in size than red bricks, less costly. Quality tests confirmed this. Four different subtypes of the Lalitpur house design have been developed.



Makwanpur house design: Stone Wood Design

Initially the design for Makwanpur houses was based on stone mud mortar concept but subsequently it was realized that the implementation of this design was very critical as the same required lot of stone chiselling, transportation of the stones from the source to construction site and this was further aggravated by the lack of availability of skilled and unskilled manpower in the remote villages of Makwanpur district having serious impact on time and cost factors of the project.

Thus, the initial design was suggested to modify so that the houses can be built with adjustments in design along with compliance with national standards and accordingly the stone wood design was agreed to be implemented which required very low quantity of stone in comparison to initial design, although the quantity of wood was significantly very high. To check the practical availability of wood, the same was checked with house-owners and with the vendors during rainy season (emergency situation) and finally the same got successfully implemented.

The initial house design (Mud Mortar) was awarded by the government and included in the countrywide government catalogue.



Those parts of the design that did not affect the structure/quality of the house could be decided on individually by HOs:

- Size of house(as per available land and if bigger if ready to contribute more)
- Porch position
- placement of door
- placement of stove (inside: where / outside)
- size of attic floor (for MP)
- for Makwanpur: inner walls/partitions (or none, how many rooms)

Obtaining government approval for the final house design proved much more time-consuming than expected, delayed the beginning of the implementation process by several weeks and resulted in an immense time pressure regarding the arrival of the monsoon season with its difficulties regarding transportation, the risk of landslides and threatening inaccessibility of sites. Three different subtypes of the Makwanpur house design have been developed.

8.2 Further planning measures

The planning process further comprised the following tasks:

- development of practical solutions in risk and project management
- conduct of contractual negotiations
- certification of trainings
- recruitment of project staff
- determination of construction stages
- market analyses
- development of a framework for financial analysis
- determination of Master Bill of Quantity (MBOQ) including materials, labour, transport, scope for self-contribution)

As part of the participatory process house owner meetings were conducted in both districts where beneficiaries were actively involved. During the planning phase the meetings comprised the following topics:

- general information
- house model discussions, building materials used
- final house design
- labour payments
- self-contribution
- organisation of documentation process (several meetings)
- landownership
- RDC meeting
- Ecosan toilets and stoves (flanking measure)

In January 2016 after individual dialogues with all team members and a workshop we made a clear division of two different teams (Team Lalitpur and Team Makwanpur) with two team leaders and field staff based firmly in their respective areas, to improve field presence, planning closer with House owners and increase the efficiency. This decision was unanimously considered as a milestone in the

project which was despite all previous board decisions more desk than field based at this time point and imperative for the smoother management of the whole project.

8.3 ODHR

ODHR is a habitat solution that is participatory and sustainable, that promotes social cohesion, and increases self-reliance. It had been successfully implemented in post-disaster areas in Pakistan, Haiti, India, Sri Lanka etc.

Part of ODHR is a long start-up period marked by assessments and participatory planning. Compared to other housing projects there are overall lower costs for one house, but higher expenditures because of supervision and assessments.

Compared to other ODHR projects SRDP was much smaller in scale and very fast (14 months).

Three principles were followed closely:

- participatory process of decision making
- adequate technical support (design, approvals, training, technical assistance, supervision)
- adequate financial assistance

Though SRDP may have not been the absolutely theoretical ODHR project, it has been adopted by adjusting to the local reality and culture of Nepal as mentioned in international ODHR guidelines. This means that the boards decided that a cash system, i.e. no grants who are paid out to beneficiaries, haven't been offered.

The project had to be tailored to meet the social and cultural context, especially regarding the situation in Makwanpur (high illiteracy rate, low awareness levels, high poverty, an extremely underprivileged target group, see chapter 3). During the landownership process cash was paid out (bus fare to the district capital Hetauda), which was used in many cases for alcohol consumption. For many beneficiaries it was not possible to handle even a small amount of money responsibly.

In Makwanpur most materials (stones, wood, mud, sand) were procured and transported by the HOs themselves as those materials were available locally and free of cost (wood cutting permissions were the HOs' responsibility, with support of SRDP staff). Other materials (nuts, bolts, cement, bitumen coat, CGI sheets etc.) were procured by SRDP and transported to the construction sites by the HOs.

Regarding Lalitpur a voucher system was developed. Materials were procured by SRDP in bulk and transport was organised (collection of receipts on delivery of materials by HO).

This cash-free system facilitates quality control and reduces the risks of misuse of funds. The risk of price escalation was reduced by monitoring the market developments continuously (Procurement Planning Tool).



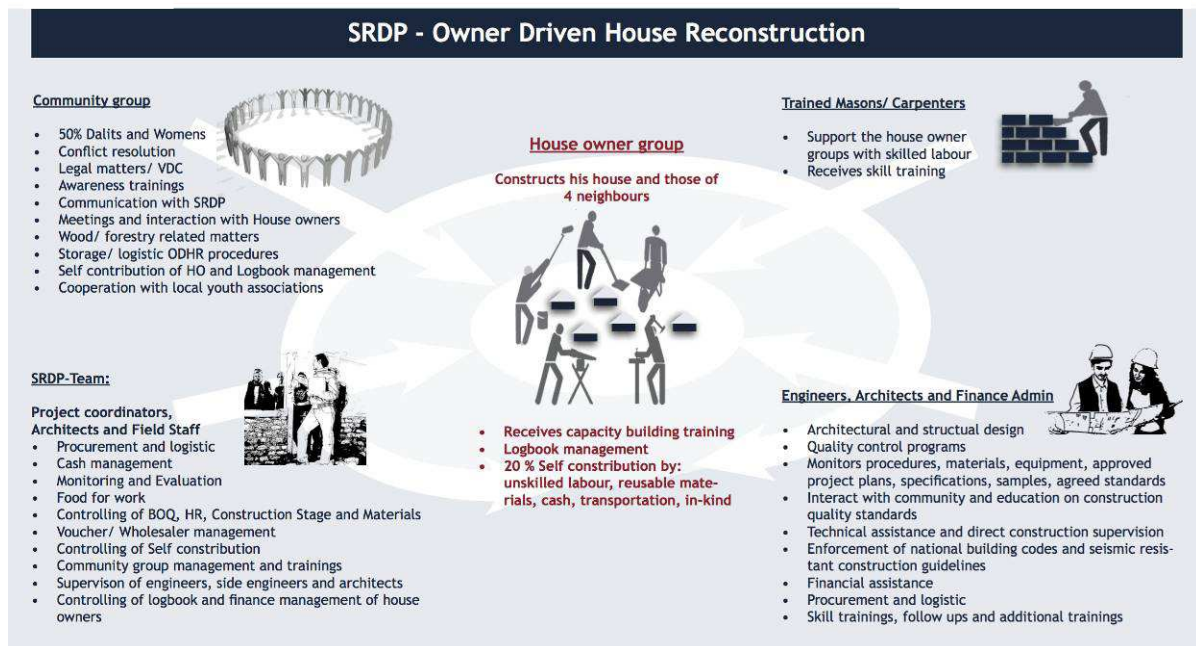
The decision to imply a self-contribution scheme was an important developmental factor, which is widely practised in Nepal and was part of previous Shangrila/ Govinda school constructions in rural areas. Beside an increased sense of ownership to involve House owners closely to the whole process (ODHR), resulting in a higher sense of ownership than in standard reconstruction projects where the HO is merely a passive recipient, the project costs decreased as well.

Overview of the ODHR Methodology in SRDP



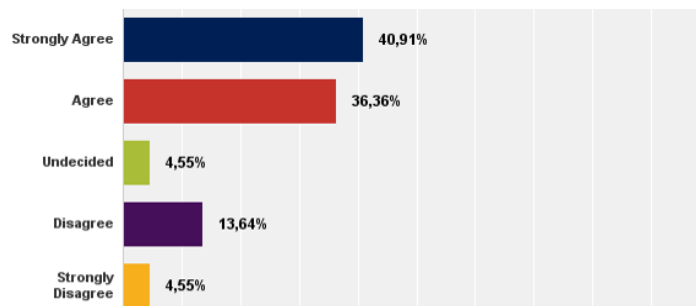
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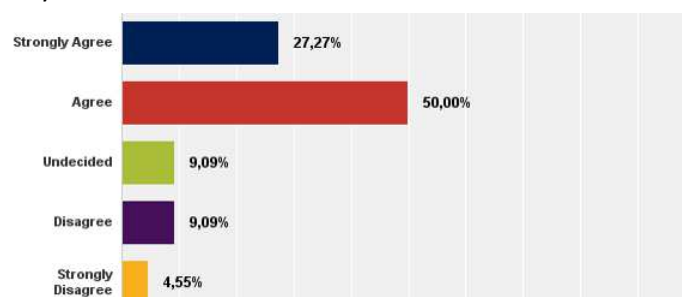
©Govinda and Shangrila Entwicklungshilfe Germany/ Switzerland

The key informant interviewees answered, being asked if **SRDP was an owner driven reconstruction** despite the difficult circumstances such as time pressure, aftershocks, late guidelines of the government and the blockade of the border, as follows:



Among the majority of interviewees that confirmed the owner driven approach it was stressed that ODHR has to "be adjusted to local context and culture" and that compromises had to be done regarding "the lack of skills of labourers and engineers, requirements of EQ safety, necessity of close supervision". Those participants who disagreed mentioned that HOs were involved, but doing mostly unskilled labour and that the "drive" came from the organisation.

The majority of the participants agreed that **SRDP generated social cohesion** among the people because of ODHR and the rotation system.



8.4 Training

In January 2016 skill trainings were organised. In Lalitpur four certified masonry trainings took place (20 to 28 participants, altogether 88 participants), in Makwanpur there were two certified masonry trainings and two certified carpentry trainings (8 to 12 participants, altogether 38 participants). Each training took place over six days. Conduct of six certified trainings for 126 carpenters and masons, which guarantees the multiplication of expertise at other construction sites after project completion

Not all participants of the trainings then worked for SRDP, some found work elsewhere and left the project.

It was the intention of the project to create opportunities for the population to gain knowledge or skills with long term value, i.e. to increase employability after the project's end. It was not assumed though that employment elsewhere would occur earlier and thus create more pressure to find suitable masons/carpenters.

Certified skill trainings

Lalitpur: (88)	Masonry training I - 28 participants Masonry training II - 18 participant's Masonry training III - 20 participants Masonry training IV - 22 participants
Makwanpur: (38)	Masonry training I- 12 participants Masonry training II- 8 participants Carpentry training I - 8 participants Carpentry training II - 10 participants

Total: 126 participants



9. Implementation

As the approval for the house design had been slowed down by the bureaucratic system implementation started only in February 2016. Before damaged houses were destroyed completely materials for temporary shelters were distributed on a need basis. To facilitate implementation the following personnel had been recruited for the project:

SRDP staff and honorary boards

Team leaders	Lalitpur: Umesh Bogati* / Maya Thapa; Makwanpur: Deepak Chhetri*
Construction supervisors	Meghendra Shahi, Dipesh Shrestha*
Accountants	Adarsha Joshi / Sushma Karki; Assistant accountant: Anjali Baruwal
Finance controller	Himanchal Pathak
Field logistics coordinators	Navraj Deuja, Anil Chepang, Mukesh Karki, Surendra Limbu, Ram Singh Praja, Rewat Rai, Aita Ram Syantang, Dev Lal Bal, Sandu Tamang
Office assistant	Gujeswori Mathema
Store keeper	Arjun Ghimire
Cooks	Iman Singh Praja, Maya Praja
Law agencies	Druba Pandey (SOH), Tilak Pandey, Pioneer Law (GDAA)
Foreign project coordinators / Supervisors of Govinda – Germany / Shangrila-Switzerland (6)	Architects / Construction Supervisors: Carola Peschl, Markus Heindl, Sandro Agosti Project Coordinators: Knut Plank, Malte Schnitger, Anisha Schubert,
Foreign project coordinators Usthi Foundation (2)	Project Coordinators: Dorit Battermann, Stephanie Theis
Honorary contributions by experts/boards throughout the complete project period (10):	Project Management by Chairpersons and General Managers: Neetha Shahi, Sunil Lama (SOH), Jay Shankhar Upadhaya (SDA), Mahesh D. Chaulagain (SDA), Rocco Umbescheidt (GDAA) Construction Experts: Carola Peschl, Yvonne Umbescheidt, Sixten Schoo, Sören Kiessling von Holtum Lawyers: Achim Mettang Graphic Design: Yvonne Umbescheidt

People marked with * were financed outside the SRDP project budget by Govinda-Germany /Shangrila-Switzerland.

Engineering Companies

Bonafide Engineering Consultancy and Construction Pvt. Ltd (10)	Anil Manandhar, Amit Subedi, Miyush Maharjan, Kamal Sharma, Kailash Kathayat, Nityananda Thakur, Prameshwor Chaudhary, Dammar Oli, Bikki Shyama, Sabin Awal
Ecotech Building System Pvt. Ltd. (8)	Badri Maharjan, Dil Kumar Maharjan, Sadit Khadka, Suraj Deshar, Amar Deshar, Bikash Darshandhari, Paras Dangi, Roshanee Kakri

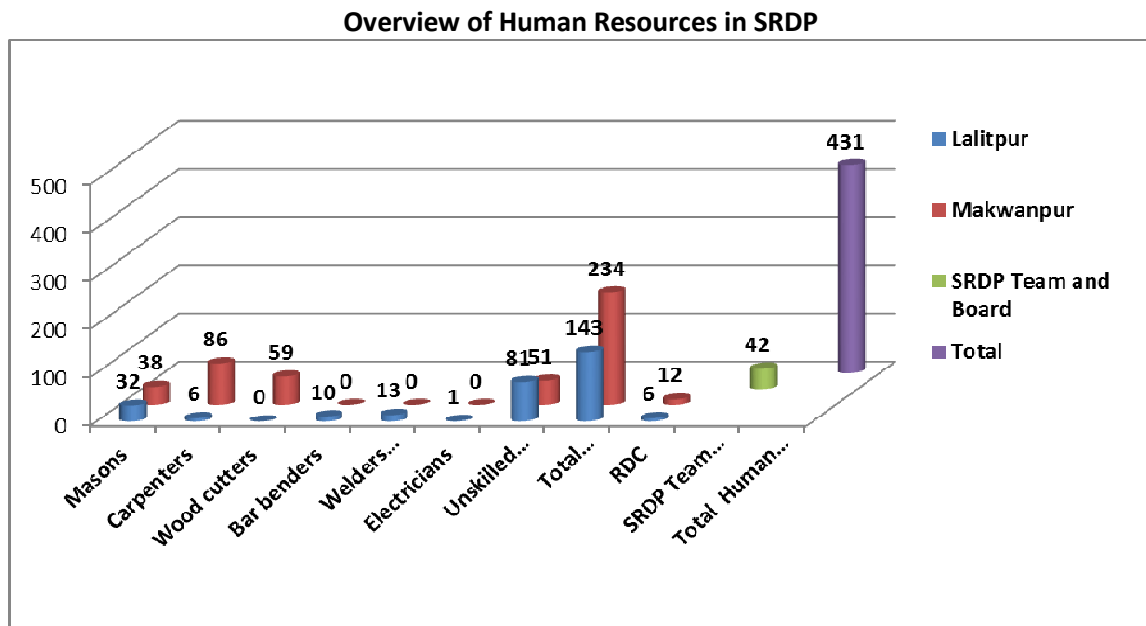
Flanking measures - sustainable technologies

Smokeless Metal Stoves	Muniraj Upadhyaya, Arun Baruwal, Ram Singh Ghalan
Ecosan Toilet	Ash Kumar Khaitu, Ramchandra Karmacharya, Ram Bilash Pant

Construction Labourers

	Lalitpur	Makwanpur
Masons	32	38
Carpenters	6	86
Wood cutters	-	59
Bar benders	10	-
Welders (roofing work)	13	-
Electricians	1	-
Unskilled Labourers	56 (house owners) + 25	34 (house owners) +17
Total	143	234

Labourers were employed on a need-basis, employment times varied between one week and 6.5 months. The Makwanpur number is also high due to the fact that conditions there are considerably harsher with its scattered settlements up on steep hillsides, only reachable by narrow trails, and the impact of the rainy season.



SRDP was further supported by local Reconstruction Development Committee members (RDC: 6 in LP / 12 in MP).

House owner meetings, as in the planning phase, were conducted regularly as an integral and important part of the construction process. The meetings took place cluster-wise and topics such as self-contribution, transportation of materials, availability of local materials (in regard of Makwanpur) were discussed.

Labourers were employed on a need-basis, employment times varied between one week and 6.5 months. The Makwanpur number is also high due to the fact that conditions there were considerably harsher with its scattered settlement pattern high up on steep hillsides, only reachable by narrow trails, and the impact of the rainy season.

The operational team can be regarded as of sufficient size and quality to assure proper monitoring of the activities, especially as numbers had been raised as per need.

9.1 Monitoring / Project management

Construction progress was monitored in a **HOUSE LOG BOOK**, a file with forms into which the HOs along with FLCs were to record working days, materials, labour payments, visits of supervisors. For the safekeeping of this file tin boxes (with locks) were issued to the HOs. In Makwanpur beneficiaries were not able to maintain the files due to illiteracy, FLCs made the necessary entries. During the implementation process MP house log books were maintained less and less as FLCs preferred to make their own notes which they kept with themselves.

The **HOUSE LOG FILE**, see chapter 7.1, was further maintained.

In April 2016 an Excel format called **CLUSTER PROGRESS REPORT** was developed. It was updated on a weekly basis by FLCs and site engineers so that construction progress, materials used, labour costs etc. could be monitored more closely.

The monitoring system further consisted of **CONSTRUCTION STAGE REPORTS**: after each of the four construction stages a report was filled out for each house, topics included where technical execution, labour management, material management, monitoring / ODHR process, finances (self-contribution, labour payments) and overall recommendations.

An **OPERATIONAL CALENDAR** was kept until end of June and helped the team to break their work down. The intended time frame had been exceeded (all houses were completed by 15 August).

MASTER BOQ AND SEVERAL FINANCE MONITORING TOOLS have been developed together with dozens of field files. Trainings with the field teams took place at several time points.

INTEGRATED WEEKLY MEETINGS took place each Friday in Lalitpur and Makwanpur respectively after the new project structure was introduced in the workshop in January 2016, present were team leaders, site engineers, FLCs, accountants, foreign supervisors, foreign project managers.

A **PICTURE LOG** was maintained for each house and contained photos of the damaged house prior to full demolition, of the construction process in different stages as well as the completed house with inhabitants. For every completed house a final report was written.



(Makwanpur: MP01.28 Dambar Bahadur Chepang's house)



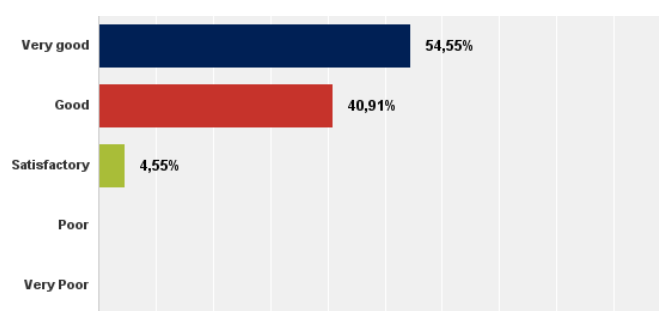
(Lalitpur: LP02.23 Aditya Kunwar's house)



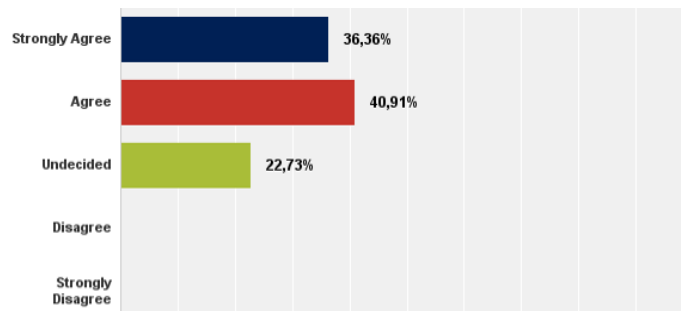
TECHNICAL SUPERVISION / INSPECTION VISITS by architects (additionally a carpenter in Makwanpur) were conducted on each construction site once a week or more often as per need. Field visit reports including construction photos and construction stage checklists were assembled after each visit. This part of the monitoring process can be regarded as most central to ensure that quality standards were maintained.

Three **BOARDS** (SOH Executive Committee, SDA Executive Committee, GDAA Executive Committee) did not only lead the project and made major decision, but they supported the whole construction process significantly and comprehensively, to compensate time, missing experience, intercultural communication problems and missing project management skills in the teams.

How was the support and leadership of the boards ?



Use of management tools and structures of the boards and controllers were helpful?



Several management tools were introduced¹¹ for facilitating the project monitoring and this was agreed by majority of the participants of the survey while some of the participants suggested that the tools could have been used more effectively and adjusted according to needs and practical aspects.

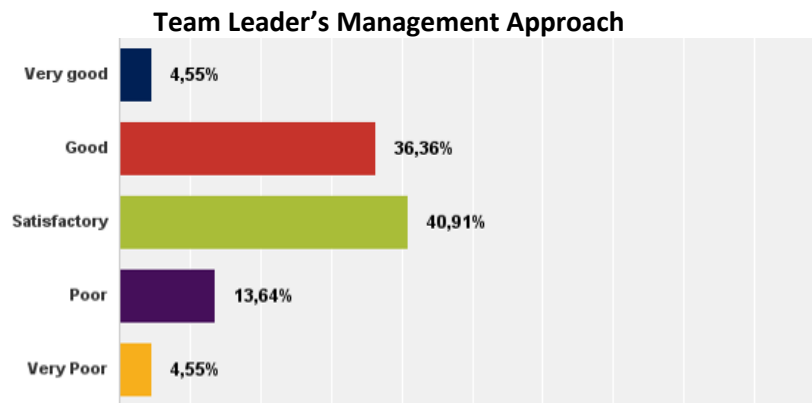
A constant process of reviewing progress and plans was part of the monitoring system and adaptations were frequent. To minimise the risk of drop-outs, steps were taken and special support given to special cases.

The whole process of implementation was slowed down by several critical factors which risked the success of the project:

- HOs and labourers had to do own farm work when pre-monsoon rains started by April
- Late approval by the government with constant rumours and design changings till January 2016
- Political blockade at the border to India and changing market situations (no gas and petrol for four months)
- procurement was more time consuming than expected and problems had to be managed then by Board members
- Delivery/transport was more time consuming than expected
 - ☐ LP: low number of available trucks/vans
 - ☐ MP: limited public transport, roads were not accessible at all times once pre-monsoon rains started (landslides), road conditions deteriorated; most construction sites were only accessible on foot via steep paths
- unavailability of workers, both skilled and unskilled (especially regarding highly skilled masons in LP)
- forest fires (wood was lost in MP)
- unreliable information about available size of wood (MP)
- construction mistakes made by labourers, lacking supervision by site engineers, thus construction parts had to be re-done
- wood cut into wrong sizes due to information gaps

The management approach of both Team leader's was appreciated by most of the participants of the survey with some exceptions where the approach was not considered somehow timely due to lack of communication factor and intervention in work.

¹¹ Examples for management tools: house criteria rating , house log file, integrated meetings, division of Teams in January 2016 in LP/ MP, procurement planning tool, training methods/ checklists, MBoQ, construction stage visit tools, metal boxes with house log books, open task/ To do lists, conference / meeting structures



In the case of MP it was decided by the boards, for example, to procure a large amount of wood from outside Kalikatar/Bharta VDC (instead of woodcutting done by the HOs themselves) to speed up the construction process when it was slowed down by external and internal factors, considering the humanitarian aspect and to complete reconstruction before next monsoon. Implementation of this decision could not be executed in time due to communication gaps or circumstances. In case of LP the self-contribution decisions haven't been implemented by all team members in the same way. While the field team and construction company communicated the board decisions, unapproved other team members caused confusions among the house owners, who need to be solved in several board meetings at the end of the project and caused reduced sense of ownership and a financial loss for other projects in Nepal.

On one hand this procurement considerably raised the house costs and decreased the scope for self-contribution, but on the other hand the time pressure caused by the onset of the monsoon season and the deteriorating accessibility of the construction sites made this procurement imperative.

ODHR VERSUS TIME VERSUS BUDGET was a central problem throughout the implementation process. Priority was given to the time factor, i.e. speedy completion of the project - on the cost of budget and self-contribution.

Another example for the project's reaction to time pressure was the employment of more external manpower. This, too, raised the house costs and limited the scope of self-contribution by the HOs.

At the same time it was realised that the more support was given to HOs the higher the beneficiaries' expectations were raised and some of them were reluctant to exert their responsibilities, expecting further support. In consequence meetings with all beneficiaries and labourers of a construction group were conducted, deadlines given for completion of certain tasks, and it had to be clarified repeatedly what ODHR means in practice.

One obstinate HO who showed an extremely passive attitude for several weeks despite having the means to fulfil the obligations was thus given a deadline and it was announced to them that participation in SRDP would be terminated otherwise. From then on the HO cooperated.

The project's reaction to changes, setbacks, delays can be regarded as good.

As a basis for fundraising and donor information a **HOUSE COMPLETION REPORT** for each house was compiled as soon as the construction was finished by mid-August 2016, see appendix.

In September each house was officially handed-over to its house owner by signing a **HANDOVER AGREEMENT** (see appendix). There is six months liability period from this time point onwards as regulated in the contracts with the engineering companies for rectification of technical defects identified in every houses

9.2 Technical implementation

Technical implementation was conducted by skilled and unskilled labourers, two teams of engineers (from two engineering companies, Bonafide Engineering Consultancy and Construction Pvt. Ltd. and Ecotech Building System Pvt. Ltd.) with support of SRDP field logistics coordinators (FLCs), supervised by a team of SRDP engineers / architects / carpenters.

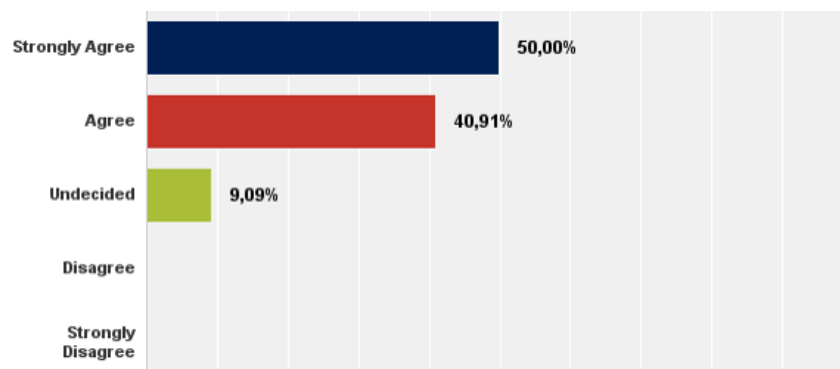
Due to the Makwanpur constructions sites' difficult accessibility (most sites only accessible on foot by narrow, steep paths several kilometres distant from the field office in Kalikatar village and at an altitude of up to 500 meters higher) one site engineer and one FLC were placed in each cluster, living in close proximity to the construction sites, with weekly visits to the field office for integrated meetings. In Lalitpur road accessibility was rather unproblematic so that a smaller team of engineers was sufficient.



Construction quality risks were minimised by the technical assistance through the site engineers' supervision and the quality control visits of the team of architect/carpenter/engineer. Construction stage checklists were the core of the technical quality control system.

91% of the participants of the key informant interview agreed (50% strongly) that the construction of structural elements was closely supervised, while 9% were undecided - because of topography and distance, as well as the occasional lack of supervision by site engineers. It was emphasized that the construction stage report system was helpful.

Construction supervision of structural elements



The expertise and quality of work of engineers in the field level was worth appreciation despite lot of complexities being observed in the construction process. It was suggested by some of the participants that there were some aspects where some improvements in terms of extensive utilization of management controlling tools/technical skills/behavioural skills could have been improved throughout the construction period.

To improve the quality of building structures, construction experts facilitated not only the masons but engineers as well in the field with improved techniques of preparation of foundation work and structural parts by practical demonstration in the MP district. This process was carried out on weekly basis along with FLCs so that the complete team understands the requirement of technical soundness for building structure. In cases where the technical gaps were identified, the project took immediate action to rectify the same and there were cases where rework was done in foundation as well. To check these kind of

errors/gaps board had taken serious action against the construction consultancy companies/FLCs so that the fundamental areas are not overlooked.

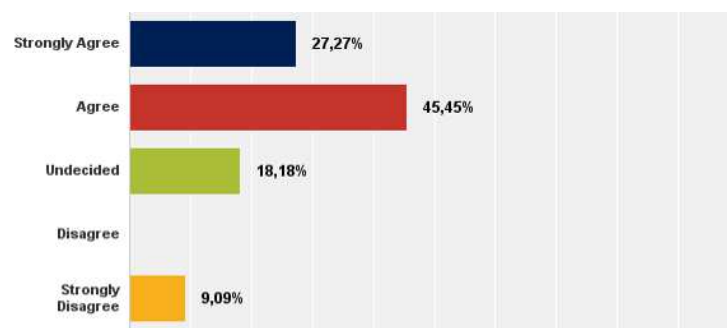
By mid-March establishing model houses in each cluster was decided. One beneficiary's house per construction group was declared a model house, where then construction was sped up, supervision was increased and where site engineers and labourers had the chance to focus on construction details. Regarding technical aspects of the construction, participants of the key informant interview gave the following answers:

Regarding **structural design of the houses** 86% of the participants agreed that the design is generally appropriate to withstand natural hazards, as the depth and width of foundation was appropriate with the geographical / soil conditions while some participants still suggested that the same could have been somehow more improved.

82% confirmed that the foundation is protected from water damage, 18% were undecided (no disagreement). Some interviewees pointed out that it was the HOs' task to build drainage trenches, as part of their self-contribution, and that SEs and supervisors informed about this and warned against negligence.

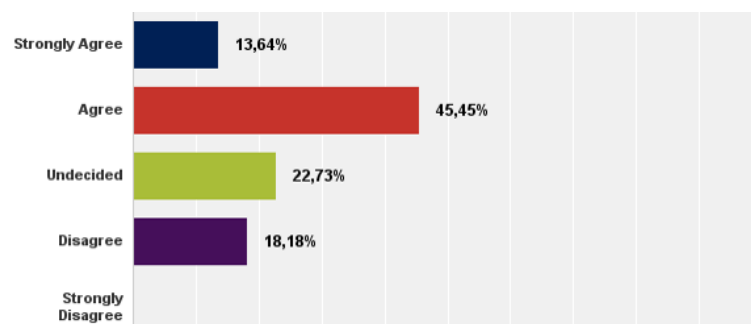


Regarding **cross-ventilation and protection from rain and sun to ensure comfortable conditions**, the participants of the key informant interviews gave following answers:



Several interviewees emphasised that the unseasoned wooden planks (in Makwanpur) will start to shrink. 68% stated that the construction sites' topographic and physical features and potential risks were properly analysed prior to reconstruction, 23% were undecided and 9% disagreed.

The majority of participants agreed that the **selection of skilled / unskilled labour** was appropriate, 23% were undecided and 18% disagreed.



Participants remarked that trainings were too short and that many skilled labourers turned out to be only "semi-skilled", that it was hard to find highly skilled workers, and that labour management was sometimes lacking.

9.3 Financial implementation

Financial monitoring tools comprised the above mentioned Bills of Quantity and the Master Bill of Quantity, as well as cluster progress reports.

50% of the participants of the key informant interview stated that the financial monitoring system was sufficient, 14% were undecided and 36% stressed that the financial monitoring system could have been better, had the frequency of management visits focused on finance in MP could have been even more frequent than it was.

55% of the participants agreed that the right tools and formats for financial monitoring were used, 27% were undecided and 18% disagreed, stating that tools and formats could have been used more effectively.

When asked what could have been improved in the finance management 36% named more monitoring, 18% stated that more training / orientation for all involved staff (team leaders, FLCs) would have been necessary, 14% said that tools and formats should have been used more effectively.

50% stated that the procurement system was cost-effective, 36% were undecided, 14% disagreed, stating that wood in Makwanpur was a critical point, not effective and delayed.

When asked what could have been done to make the project more cost-effective, 23% named a simpler house design, 18% stated the time factor (if construction approvals had come earlier and if implementation of board decisions had not been delayed), 14% named more involvement of house owners / higher self-contribution and 14% stated better wood management in Makwanpur.

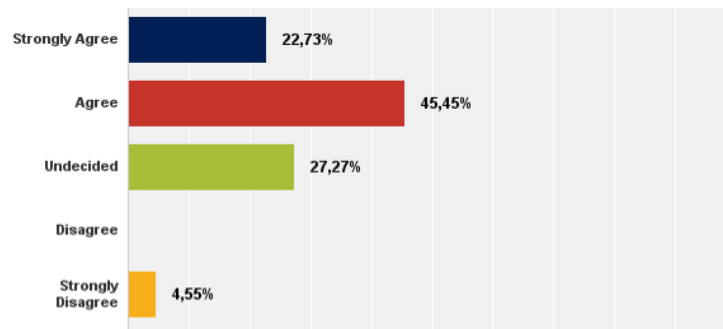
59% said that the project¹² was cost-effective, 27% were undecided and 14% disagreed. It was pointed out that it is nearly impossible to find 6% admin costs and 33% honorary contributions by experts beside the HO self-contribution in a similar project.



¹² Including house design and cost, honorary contribution of experts and boards, procurement, admin costs.

9.4 Gender Issues

Regarding gender issues, key informants responded positively as depicted in the chart below:



Male-and female-headed households were equally addressed by the project, single-headed households were favoured as one selection criterion.

No distinction was made whether the landownership was in the name of a man or a woman, but the fact that landownership is traditionally in the name of the oldest male household member was not challenged for the project.

Labour payment for men and women were the same as decided by the boards, while at the same time women were not permitted to carry very heavy loads.

There was a special focus on women's needs / *practical gender needs* regarding flanking measures. Cooking is traditionally women's work and carries health hazards for women (see following chapter). The installation of smokeless cooking stoves was planned to especially improve the living conditions of women.

9.5 Flanking measures

9.5.1 Smokeless cooking stove

Especially in Makwanpur cooking is done on open fires, which is the reason for respiratory illnesses, eye infections and burns (especially small children) being widespread especially among women and children as well as a high fire wood consumption. Installing smokeless cooking stoves as a flanking measure was thus planned early in the project development.

The decision for a metal stove was taken after comparing types of stoves and establishing criteria such as efficiency, costs (also for transportation, installation and training), availability, additional functions (water heating, air circulation etc.), durability, maintenance, weight, material, temperature control.

Smokeless cooking stoves, developed by RIDS-Nepal (Rural Integrated Development Service-Nepal, http://www.rids-nepal.org/index.php/Smokeless_Metal_Stove_SMS.html), produced in Nepalgunj, were delivered and installed right after completion of the houses - or earlier, i.e. when the necessary platform where the stove was placed was finished. It was the HOs' own decision where the stove was installed: inside the house, on the porch or elsewhere (a separate shelter). Almost all HOs opted for a porch placement.

A representative of RIDS-Nepal, Muni Raj Upadhyaya, trained two workers from Makwanpur and Lalitpur respectively, to be able to repair and maintain the stoves.

Information about the correct use of the stoves was passed to the HOs during installation. Follow-up check-ups will be undertaken by SDA/SOH together with Govinda/ Germany and Shangrila/ Switzerland.



41% of the participants of the key informant interview stated there was no risk of indoor smoke, ash and cinders, 41% were undecided and 18% disagreed, naming the automatic risk of a wood construction (regarding Makwanpur) and stating that there is some risk of fire as most HOs in MP are illiterate.

9.5.2 Ecosan toilet

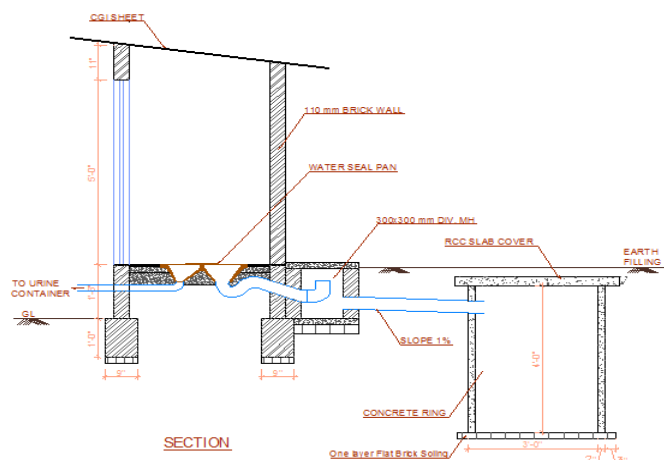
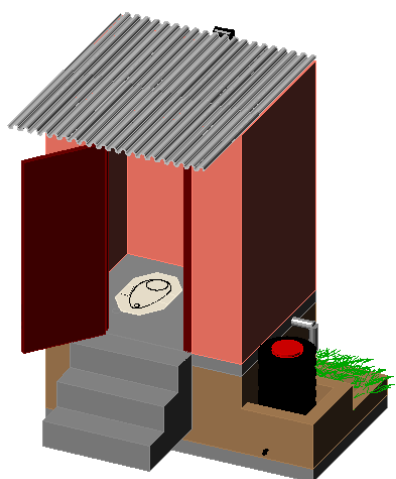
The construction of Ecosan toilets (for all beneficiaries who did not have an own toilet) started after housing construction was completed, with a time frame from 15 September to 31 December 2016, so that it is not included in this evaluation report.

The decision to use ecological sanitation as a sanitary system was made in order to reduce health risks, to protect water resources and to enhance soil fertility. It was undertaken in cooperation with ENPHO (Environment and Public Health Organisation). Through Ecosan toilets it is possible to produce fertiliser in a scientific and hygienic way as it is a system that "closes the loop" between sanitation and agriculture.

A demo construction combined with a construction training conducted by ENPHO was the starting point of the implementation process.

The core project team consists of a team leader / engineer, field coordinators, masons, an accountant, a financial supervisor as well as general supervisors.

91% of the participants of the key informant interview stated that there was a special focus on implementing a sanitation solution, 9% disagreed.



9.5.3 Reforestation project

A reforestation project - to counteract the high use of wood for the house construction in Makwanpur - started after completion of the construction and of this evaluation. It is conducted in close cooperation with local authorities. The project also involves for example the Kalikatar child and youth club, as part of an education approach and to raise awareness about the environment among the young.

10. Sustainability

To ensure ownership beneficiaries had been involved in all planning stages (decisions about house design, materials used etc.) and played a major role in the implementation process through their self-contribution in kind and labour.

Maintenance is a crucial part of sustainability of the structures and requires not only a sense of ownership, but technical skills, financial resources, access to tools and follow-up inspections.

A thorough maintenance check from the engineering companies took place one month after the construction's completion (mid-end of September). The engineering companies are responsible for a liability period of 6 months for maintaining the houses.

Maintenance training (and inspection) takes place between September and December 2016.

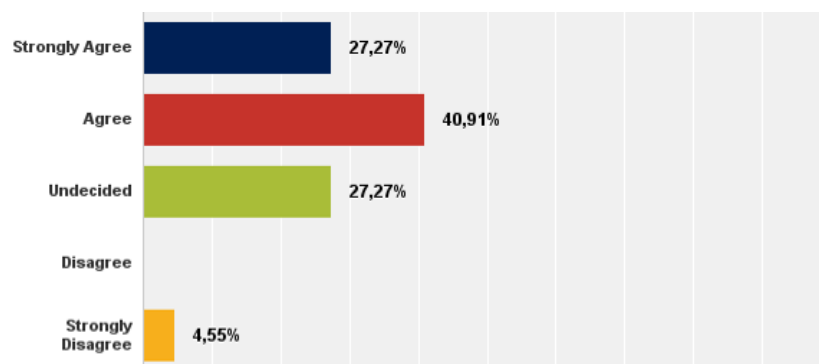
In February there will be a construction check-up and follow-up visit by a team of foreign architects (who supervised the building construction).

Nevertheless, the main responsibility for the houses is of the house owners', which is confirmed and described in a "handover letter", passed to the beneficiaries in September 2016.

When asked about what further support would be beneficiary for the HOs, 27% named trainings regarding agriculture and another 27% listed the construction of toilets (construction of toilets was part of SRDP, but started only after housing construction, the interview was conducted before toilet construction was started). 18% stated maintenance training.

Due to the fact that SOH is active in Lalitpur district on a long-term basis and SDA in Makwanpur respectively together with Govinda- Germany and Shangrila- Switzerland there is no real phasing out of SRDP.

A central question regarding sustainability of housing reconstruction projects is whether elements of the project or the whole **construction could be replicated / scaled** elsewhere:



68% of the key informant interviewees agreed that the project could be replicated / scaled up elsewhere, whereas 27% were undecided. Some interviewees emphasized that management tools, house designs, the rotation system, techniques can be used by others and "that self-contributions creates a sense of ownership". Undecided interviewees stated that elements would have to be adjusted for the local needs, the culture, the landscape of the people as SRDP did it in Makwanpur and Lalitpur and that HOs willing to contribute are necessary.

One interview participant stated:

"This project can be a great resource for the one doing reconstruction in coming days."

11. Evaluation

11.1 Focus group discussions

Focus group discussions (FGDs) are an instrument for feedback between beneficiaries and project staff, a method of qualitative research with a strong bias on dialogue. They are guided solution oriented discussion in a participatory approach.

Between mid-August and beginning of September 2016 7 FGDs with groups of 5 to 12 participants were conducted in an informal and natural way, so that participants felt at ease and not under pressure. They were implemented to analyse the level of satisfaction of the ODHR beneficiaries as well as cultural and social appropriateness. In the context of SRDP, they are part of a triangulation method of this internal participatory evaluation.



The moderators were formerly not connected to SRDP and not known to the house owners. For a list of the questions asked during the discussions see appendix.

In Makwanpur 88.2% of the house owners attended (in some cases adult family members involved in the construction), in Lalitpur the attendance rate was 68.2%.



When asked about the house the participants unanimously stated that the house was better / stronger than they expected and that they appreciated its earthquake-resistance. Only few HOs of Lalitpur expected even higher quality of the windows and a larger house. For all of them it has been a considerable improvement for the lives of them and their family members. The majority of beneficiaries stated that they would not have built a new house by themselves and would continue living in temporary shelters (cowsheds, tents etc.) or in half-destroyed houses. Some said they would have built a house on their own, but much smaller, weaker and not earthquake-safe. When asked about making changes/additions to the house the majority declared not to have any plans, either because they are happy with the house as it is or because of lack of money. A few HOs of MP said, they would build a partition to divide the room.

By far the majority of the HOs worked in a rotation system on their own house and on other HOs' houses in their cluster; they stated they enjoyed this and felt a sense of community with the others. Due to larger distances between the construction sites some HOs did not work in a rotation system.

All HOs appreciated the support of SRDP staff and site engineers. Some dissatisfaction was expressed regarding labourers in Lalitpur. There was a lot of satisfaction concerning the delivery/procurement of materials, delays in delivery was criticised in a few cases, due to bad road conditions.

11.2 Key informant interview

An online survey with key informants of SRDP was conducted after the project's completion (15 August 2016).

The participation rate was 50% (22 of 44 invited key informants).

41% of the participants were construction group experts/ project coordinators or board members of Shangri-La Orphanage Home (SOH), Shangri-La Development Association (SDA), Govinda Development Aid Association, Germany (GDAA), Shangri-La Development Aid Association, Switzerland (SA), Usthi Foundation), Switzerland (USF). 27% belong to the engineering company Bonafide Engineering Consultancy and Construction Pvt. Ltd., 9% to the engineering company Ecotech Building System Pvt. Ltd. 14% were SRDP team members in Lalitpur district and 9% SRDP team members in Makwanpur district.

36% were between 36 and 50 years old, 32% were between 26 and 35 years old, 28% were between 18 and 25 years old and 5% were older than 66 years.

36% of the participants had been fully involved in the project for 12 to 15 months, 32% had been fully involved for 4 to 8 months, 18% 8 to 12 months and 13% 2 to 4 months.

There were 37 closed questions (with the options of further remarks) and 13 open questions. For a list of the 50 questions see appendix.

11.3 Main evaluation criteria - summary

The main criteria for this evaluation were the following: social - technical - financial - environmental.

11.3.1 Social aspects

Regarding the social aspects of the project it can be clearly stated that the level of satisfaction of the beneficiaries is very high (see focus group discussions) and that it answered the real needs of the beneficiaries (confirmed by 82% of the key informant interview's participants).

That the project had an empowering effect on marginalized people and it was further confirmed by 82% of the key informant interview's participants

Regarding the whole community, income-generating opportunities had been created. Participants of the trainings (126 carpenters/masons) benefit from them through new employment opportunities.

Participation and engagement of the beneficiaries can be regarded as good. The ODHR approach had to be adjusted to the local context in answer to the immense time pressure and the circumstances.

11.3.2 Technical aspects

Basic technical aspects comprise the following:

- quality control over the construction process
- compliance of houses with regulations
- performance and adaptation of building technologies used
- materials supply chain
- logistics and procurement
- sanitation, sewage and solid waste disposal systems

All technical aspects were answered to, resulting in the construction of earthquake-resistant houses, with a 100% occupation rate. For a detailed analysis see chapter 9.2.

11.3.3 Environmental aspects

Environmental aspects involve the scale and impact of the construction process on the environment

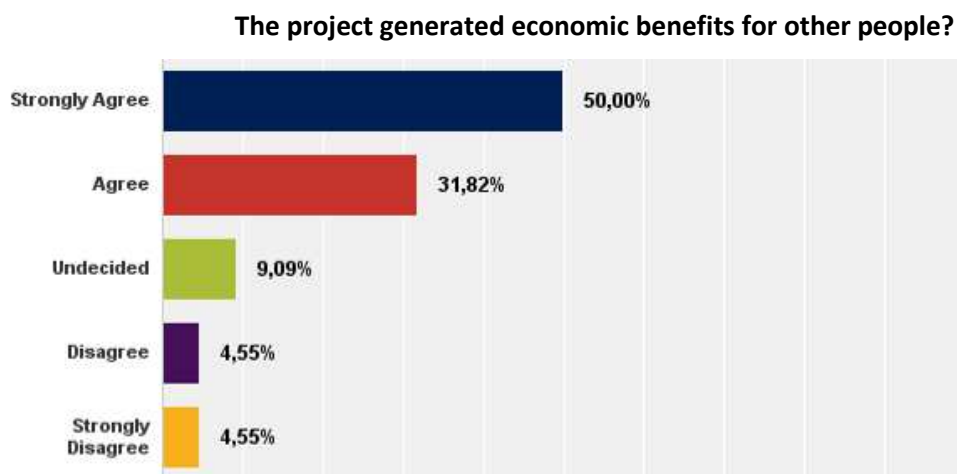
73% of the key informant interview's participants confirmed that the project included measures to lower any negative environmental impact, 18% were undecided, 9% disagreed (because of transport of some materials from Kathmandu to Makwanpur)

Much less reusable material was used for construction than it was preliminarily expected and planned. 50% of the interviewees stated that recycled materials were used, 9% undecided, 41% disagreed.

11.3.4 Financial aspects

Financial / economic aspects refer to the cost-effectiveness of the programme, its impact on local markets and livelihoods development within the community.

Overall the project can be regarded as cost-effective, confirmed by participants of the key informant interview (see chapter 9.3). The project costs were reduced by 33% through voluntary professional work in the fields of law, engineering, graphic design and project management by the teams of Govinda-Germany and Shangrila- Switzerland. The admin costs of project are much lower than in comparable projects and defined in the government guidelines.



The increased cash flow in Makwanpur/ Kalikatar village, caused by site engineers and SRDP staff, has to be taken into account as well.

Financial monitoring tools and formats developed for the project can be regarded as good, but implementation could have been more effective.

The critical point regarding the economic aspects of SRDP was the wood procurement for Makwanpur houses. Due to the time pressure procurement from outside the target area and humanitarian factors (hundred thousand of homeless people live since 17 months in temporary shelters and had to face the 2nd monsoon with three months of heavy rain) had to be undertaken. This caused a rise in budget and decreased the beneficiaries' self-contribution. The financial risk management of the European boards of

Shangrila Switzerland/ Govinda Germany was prepared for this situation, so that fast and humanitarian decisions have been possible.

11.4 Logical Framework

The full logical framework consists of further outcomes (TIS, WASH, HUBs (distribution and coordination centres) and emergency relief) - they are excluded here as not part of this evaluation.

	Intervention logic	Indicators	Means of verification	Assumptions
Overall objective (impact)				
	To contribute to safer houses in the earthquake affected areas of Lalitpur and Makwanpur districts, particularly families related to GDAA activities disposed of houses of improved life quality including earthquake safety, access to safe water and sanitation and improved cook stove (ICS)	<ul style="list-style-type: none"> The reconstructed houses are certified to be earthquake resistant by engineers. Life quality in the new houses has increased, e.g. due to reduced in-house smoke and unlimited access to safe water and sanitation and a smokeless kitchen. 	<ul style="list-style-type: none"> - project monitoring reports - evaluation report - feedback from the beneficiaries - long-term observations 	
Outcomes				
RH	95 earthquake-affected families reconstruct their earthquake-resistant houses for increased quality of life	<ul style="list-style-type: none"> 95 earthquake-proof houses built 	<ul style="list-style-type: none"> - Monthly project monitoring reports during reconstruction phase - Follow-up and conduct on-site trainings - Ensure cash flow and other assistance 	<ul style="list-style-type: none"> - Sufficient construction material is available - Sufficient workforce is available - Families reconstruct their houses by an owner-driven

			required <ul style="list-style-type: none"> - Monitoring and close-up by engineers experienced in construction of earthquake resistant houses - Regular dialogue with community and representatives 	housing reconstruction (ODHR) approach
Outputs				
RH				
2.1	Earthquake-resistant construction masonry training provided to residents of the project areas	6 masonry trainings provided for earthquake resistant reconstruction # of female participants in the trainings # of male participants in the trainings	- Activity report - List of participants	
2.2	Construction materials are procured to reconstruct 95 houses, incl. the procurement of brick machines	60 houses are reconstructed in Lalitpur; 35 houses are reconstructed in Makwanpur	- house log file - evaluation report of engineers - picture database	the directives of the government do not hamper the implementation of reconstruction
2.3	Contract with construction company to supervise and manage the reconstruction according to the ODHR approach	One national construction company is appointed to implement the reconstruction.	contractual agreements and ToRs per engineer and technical advisor	
2.4	95 Earthquake-affected and destroyed houses are reconstructed or renovated	number of houses reconstructed and rehabilitated # of reconstruction of houses from female-headed families # of reconstruction of houses from men-headed families	- monthly reconstruction monitoring report - documentation in pictures showing the houses before and after reconstruction - house log file	

The overall objective has been reached with the completion of the first Owner driven housing reconstruction project in Nepal. The outcome is slightly less than proposed in the Logical Framework Activities (LFA) for SRDP: 90 houses instead of 95. Reasons for this were difficulties in acquiring landownership rights and in one case the unwillingness of a beneficiary to cooperate (see chapter 7.2).

Beside this Govinda Germany, Shangrila Switzerland and Shangrila orphanage have constructed 14 houses for staff members and youths of the project who have been affected by the earthquakes, a community hall in Champi and temporary schools for thousands of students. The project called BRSP, was independently managed and funded from SRDP by SOH, Govinda- Germany and Shangrila - Switzerland.

In addition to the six planned mason trainings there were two carpentry trainings. There were no female participants. No brick machines were procured, concrete bricks were procured in bulk and not fabricated on site, since the government approved the interlocking brick technology after the project time. This late approval process of a modern technology with several positive side effects regarding costs and constructions in rural areas, caused another round of construction designs and additional project costs.

Not one, but two engineering companies were contracted, one for each target area.

11.5 Lessons learned

11.5.1 The importance of team work

It cannot be emphasised enough how important team related issues were. Teamwork can be regarded as one of the major success factors of SRDP, stated by 50% of the participants of the key informant interview. Good communication, respectful cooperation, commitment and team-building measures contributed to this.

Throughout interview the importance of teamwork was stressed in many open answers, it was even stated by 23% of the interviewees as one of the most positive results of SRDP, the most common of very differing answers.

One of the Senior engineer in the program after concluding the project mentioned that from this project s/he learned that things that seem impossible were possible due to determination and team spirit. When asked what was good regarding team work 18% mentioned the team's high motivation and 14% stated that cooperation between team members was very good. In answer to the question what should have been improved regarding team work, 18% of the interviewees said that intercultural and intra team communication should have been better and 14% suggested more team building workshops (while stressing that the conducted workshops had been very helpful).

41% of the participants stated that at those times when the project implementation seemed very difficult / challenging / frustrating, what helped best to overcome this phase were team-related things, such as workshops, meetings, talking to other team members or the team spirit itself.

Another 41% gave answers regarding the beneficiaries, such as talking to them, visiting their places, "see how they live" - or thinking of the humanitarian aspect of the project. One interviewee said, "the smiles on local people's faces and the hope of new house in their eyes kept me inspired".

11.5.2 The time factor

The time factor is another very important issue. Time pressure can easily be caused because situations arise that prevent people from work - in the case of SRDP farming after pre-monsoon rain showers. Farmers (97% of the MP beneficiaries) need to work on their fields (and on their neighbours' because of the rotation system of neighbourly help) after a rain shower and will not under any circumstances miss out on that - the next harvest depends on it, i.e. food for several. It is imperative to adapt to changing contexts, introduce flexible schedules and engage additional labour.

Another example for a situation that added to the time pressure was when water pipes were burnt in forest fire and beneficiaries had to stay away from construction sites to lay new pipes.

Acquiring government approvals for reconstruction proved to be extremely time-consuming. In addition regulations may change and thus require designs to be re-done for 7 months with a load of extra and night work for engineers, team and board members.

When asked what was most surprising during project implementation the most common answer (23%) in the key informant interview was that the project was successfully completed despite the time pressure and all complexities.

Time was named by 32% as one of the main risks in the implementation. (23% stated material management and transport, while 18% listed self-contribution.)

50% of the interview's participants confirmed that decisions of the board had not been implemented in time, and that costs and time could have been saved. 18% stated there were no delays (all engineers, who were involved in implementation of the decisions), 32% were undecided or did not answer.

As the biggest challenge of the project, 32% named the difficulties of getting the house owners to participate, 23% stated the management of materials (procurement and transportation), while 18% listed time management.

11.5.3 House owner participation

The principle of OWNING the reconstruction process proved difficult for the beneficiaries. Because of the short time frame, literacy and later implementation of board decisions to manage House owner meetings from the beginning onwards, it was hard for HOs to identify with their required role as informed decision-makers of the ODHR process despite informal meetings, detailed assessments, participatory planning, monitoring and technical training. The full scope of what ODHR really means was not understood by all beneficiaries. During the implementation it was realised that the attitude of some HOs often remained passive and that they understood themselves as recipients of donations. Project staff in LP complained greediness and that some HOs tried to contribute as little as possible. Meetings with SRDP staff, motivational talks and repeated explanations of the meaning of ODHR did not change this attitude. A proper implementation of preventive board decisions and leadership of some team members in Lalitpur could have avoided this problem.



11.5.4 Monitoring tools/formats and their implementation

Monitoring tools and formats, especially regarding finances, but also for procurement, construction supervision, self-contribution etc. are essential for any construction project. Correct implementation has to be assured and staff needs to be trained in their use. The tools' and formats' flexibility has to be assured. They have to be adjusted to changing needs, as not all requirements may be seen from the beginning.

11.5.5 Supervision and quality control

Close supervision and technical advice is essential to ensure quality construction. Construction experts demonstration and support concerning construction details especially regarding earthquake safety have been proved fruitful not only to the masons but to the engineers as well. Regular monitoring/supervision visits of all construction sites by experts (architects/carpenters) are necessary on a weekly basis at minimum - more often at critical points. Maintaining field visit reports (including photos of construction details) and construction stage checklists is an important part of the supervision.

11.5.6 Reliable data for initial assessment

Gathering reliable data for the initial assessment may be difficult because problems, questions of who can be asked, who can be trusted, who is informed need to be clarified first. Asking the right questions can be challenging as well - for example enquiring not only about the available quantity of materials such as wood, but also about the required sizes.

11.5.7 Adjustment to challenging work surroundings

Not all staff may be easily able to settle down in a remote area under simple living conditions. It is important to make sure that all project staff and contracted engineers understand what living in a remote area means, and are informed about living conditions, climate, altitude, health risks etc., as well as the time frame and a possible extension of the project's duration.

12. Major achievements

- Construction of 90 earthquake-resistant houses, incl. smokeless stoves (ecological toilets under construction at the time of project evaluation) - despite a multitude of hindrances such as aftershocks in the first project phase, the blockade of the Indian border (i.e. lack of petrol and other necessities), government bureaucracy, accessibility problems of construction sites):
 - 56 houses in the municipalities of Bajrabarahi, Karyabinayak, Godawari in the district of Lalitpur
 - 34 houses in the VDCs of Kalikatar and Bharta Punyadevi in the district of Makwanpur
- Conduct of eight certified trainings for 126 carpenters and masons, which guarantees the multiplication of expertise at other construction sites after project completion
- Acquisition of 63 landownership certificates (and transfer of 24 landownership rights)
- Development of the Makwanpur house design (earthquake-resistant, according to National Building Code, using local resources), which was approved by the Department of Urban Development & Building
- The initial Makwanpur house design (Mud Mortar) was awarded by the government and included in the countrywide government catalogue.
- Improvement of a government approved design (for Lalitpur)
- Implementation of a follow-up reforestation project (ongoing)

"None of us could have built such a house, no one had the capability, even to build this was tough."
(Santa Bahadur Gombo, Ghodame (Makwanpur))

"All family members were very worried when the earthquake happened, but now we are happy with new house."
Shyam Krishna Pariyar, Lele (Lalitpur)

13 Acronyms

BoQ	Bill of Quantity
FGD	focus group discussion
FLC	field logistic coordinator
GDAA	Govinda Development Aid Association (Germany)
HO	house owner
LP	Lalitpur
MBoQ	Master Bill of Quantity
MoU	Memorandum of Understanding
MP	Makwanpur
ODHR	owner driven housing reconstruction
SA	Shangrila Development Association (Switzerland)
SC	self-contribution
SDA	Shangri-La Development Association
SE	site engineer
SOH	Shangri-La Orphanage Home
SRDP	Shangri-La Reconstruction and Development Project
USF	Usthi Foundation (Switzerland)

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15 Appendix

15.1 Documents consulted

- Meeting minutes
- Construction stage reports
- Cluster progress reports
- Field visit reports
- Construction stage checklists
- House log books
- House log file LP / MP
- and other monitoring and operational tools
- Picture log

15.2 House owners who received landownership

House owners who received landownership certificates through SRDP

Lalitpur - altogether 34 beneficiaries:

Paras G., Laxmi M., Prashant R., Nishan C., Aditya K., Sanjay K., Anup B., Aryan S., Sidita K., Kanchan P. (10 beneficiaries)

For the following 24 beneficiaries land rights were transferred within the family with SRDP's support:

Sanjeevini K., Saiendra P., Raj P., Jenisha T., Anusha N., Yogesh S., Kripa T., Swikriti T., Rabindra B., Tanka P., Deepika M., Samir S., Bijaya N., Anish K., Jay K., Sudeep K., Deepika M., Sanis T., Samir S., Suresh N., Deepa N., Sagar M., Supriya T., Nabina K.

Makwanpur - altogether 53 beneficiaries:

Dambar B., Rikhiram P., Ram K., Sano K., Thulo K., Dipendra C., Singha B., Navraj S., Iman S., Purna S., Lila B., Namraj C., Nar B., Bir B., Ram K., Thuli M., Mohan S., Chandra B., Durga B., Gane P., Pratap S., Shiva P., Aita R., Jhalak B., Jangilal P.,
Iman S., Nar B., Ratna B., Krishna B., Khemraj P., Kanchi M.

Alongside these 31 house owners (only three Makwanpur HOs already had landownership rights), another 22 persons, the majority of them family members of house owners, received landownership certificates through the support of SRDP.

15.3 MoU - Agreement with beneficiaries

Agreement for Construction of Housing Unit

This Agreement for the Construction of the Housing Unit dated [_____] (the "Agreement") is entered by and between (A) [_____] *SURNAME* permanent resident of [_____] *COMPLETE ADDRESS*], duly represented by [_____] *NAME OF THE PERSON WHO WILL BE SIGNING THIS AGREEMENT FOR BENEFICIARY* (hereinafter referred to as "Beneficiary"); and (B) Shangri-La Orphanage Home, a non-governmental organisation organised and registered in accordance with laws of Nepal, (hereinafter referred to as "SOH").

Beneficiary and SOH shall hereinafter be also referred to as a "Party" and collectively as the "Parties".

WHEREAS the Beneficiary is the victim of the earthquake that occurred in Nepal on April 25, 2015 and May 12, 2015 and have lost shelter for [his/her] family;

WHEREAS SOH is desirous to provide necessary assistance for construction of the Housing Unit and transfer to the Beneficiary on the basis of Owner Driven Housing Reconstruction Model (the "Work").

WHEREAS this Agreement is entered in between the Beneficiary and SOH to set out certain points of understanding in relation to setting up and construction of the Housing Facility for the Beneficiary.

NOW, THEREFORE, the Parties hereby agree as follows:

1. DEFINITIONS

In this Agreement unless the subject or context otherwise requires, the following words and expression shall have the meanings hereby assigned to them hereunder

- a. 'Construction Plan' shall mean as the milestone plan, *modus operandi* and steps for the Construction of the Housing Unit as given in Annex-I of this Agreement.
- b. 'Consultant Company' shall mean as the Consultant Company appointed by SOH for the purpose of supervision, technical support and engineering services for the construction of the Housing Unit.
- c. 'Drawings, Designs' shall mean as the details maps, drawings, designs for the construction of the Housing Unit as given in Annex -I of this Agreement.
- d. 'Housing Unit' shall mean as the residential house to be constructed as per the Drawings, Designs and Construction Plan and transferred to the Beneficiary as per the provision of this Agreement.

2. SCOPE OF WORK

- 2.1. The Beneficiary and the SOH shall cooperate together to complete the work on the basis of Owner Driven Housing Reconstruction Model.
- 2.2. The SOH agrees to provide certain cash, construction material and technical assistance to the Beneficiary and the Beneficiary agrees to receive and utilize the cash, construction materials and technical assistance provided by the SOH to complete the Work.
- 2.3. The Beneficiary agrees to co-operate with the SOH and Consultant Company appointed by the SOH to complete the works by [_____] *DATE*.

3. DRAWINGS, DESIGNS AND CONSTRUCTION PLAN OF THE HOUSING UNIT:

- 3.1 Drawings, Designs and Construction Plan of the Housing Unit are provided in Annex I of this Agreement.

- 3.2 The Beneficiary agrees to co-operate with the Consultant Company and to provide everything necessary to ensure that construction of the Housing Unit is carried out as per the Drawings, Designs and Construction Plan as given in Annex-I of this Agreement.
4. TRAININGS AND SUPERVISION:
- 4.1 The Beneficiary understand that construction and handover of the Housing Unit shall be based on Owner Driven Housing Reconstruction Model and therefore agrees to be engaged in the construction of the Housing Unit as required by the SOH and Consultant Company.
- 4.2 Consultant Company shall provide the training for certain skills required in relation to Construction of the Housing Unit to the Beneficiary. It shall be the duty and the obligation of the Beneficiary to participate in such training and express their best endeavour to learn such skills in the training session.
- 4.3 The Beneficiary agrees to comply with the (a) training manuals received in the course of Training Sessions and (b) instructions, provided by the Consultant Company in different stages of Housing Construction. Different stages of Construction of Housing Unit are given in Annex -III of this Agreement.
5. CASH AND MATERIALS DISTRIBUTIONS:
- 5.1 SOH shall provide cash assistance and material assistance (construction material) to the Beneficiary which shall cover up to eighty (80) percent of the cost for construction of the Housing Materials on instalment basis as set out in Annex -IV (Construction and Payment Schedule) and Annex VI (Grant Distribution Mechanism) .
- 5.2 The Beneficiary agrees to utilize the cash and material assistance received from the SOH solely for the purpose of construction of the Housing Unit. The beneficiary shall not use such cash and material assistance for the purpose other than the purpose and Work agreed hereunder. Upon finding contrary, the SOH shall have the option to terminate the Agreement with immediate effect and demand reimbursement of the cash assistance and material assistance and other ancillary costs as per Clause 11.2 hereto.
- 5.3 SOH shall provide a log book to the Beneficiary for the purpose of maintaining the record of cash and material assistance received by the Beneficiary on instalment basis from the SOH. SOH, Consultant Company and their representative shall have the right to inspect the logbook at any time during the period of the Work and it shall be the duty of the Beneficiary to present such logbook to the SOH, Consultant Company and their representative as and when required.
6. CONTRIBUTION FROM THE BENEFICIARY:
- The beneficiary agrees to contribute twenty (20) percent of the total construction costs in cash and in kind. Contribution from the Beneficiary can be channelized to the construction cost of Housing Unit from in kind contribution such as construction materials, provisions for transport facility, food for work, participation as labour and other means and modalities agreeable to the SOH. The means and modalities of the Contribution from the Beneficiary shall be as given in Annex V (*Self Contribution Details and Sketch/ Drawing*).
7. LAND OWNERSHIP AND CONSTRUCTION PERMIT:
- 7.1 The Beneficiary is required to furnish/ present an [Original] Copy of the Land Ownership Certificate on which Housing Unit will be constructed, to the SOH, before the start of Construction of the Housing Unit.
- 7.2 The Beneficiary shall be responsible to obtain the construction permits from the authorities and process all necessary approvals in relation to the Construction of the Housing Unit (if required).

8. SAFETY MEASURES:

SOH shall provide necessary safety equipment and tools [helmets, gloves, safety goggles etc.] required for the construction of the Housing Unit. It shall be the responsibility of the Beneficiary to ensure that safety measures are implemented at their construction site.

9. MEETINGS AND REPORTING:

The Beneficiary shall attend bi-weekly group meetings called by [_____] *PARTY NAME WHO WILL CALL SUCH MEETING*] and [_____] *RDC MEETING: INSERT THE FULL DESCRIPTION INTENDED TO BE GIVEN TO SUCH RDC MEETING*] called by [_____] *NAME OF PERSON WHO WILL CALL RDC MEETING*] once in a month (at the minimum) for the timely and successful reconstruction of the Housing Unit.

10. CERTIFICATE OF COMPLETION

The Beneficiary shall be provided with the Certificate of Completion once the construction of the Housing Unit is completed to the satisfaction of the SOH.

11. TERMINATION

- 1.1. Both the Beneficiary and the SOH can terminate this Agreement by providing a [] days [written/ oral] notice in advance.
- 1.2. SOH shall have the option to terminate the Agreement by providing a [] days' notice in advance in case the beneficiary breaches any provision of this Agreement. In this case and if the beneficiary terminates the contract by himself, the Beneficiary shall reimburse the payments received and also the actual cost that SOH has incurred for the construction of the Housing Unit.
- 1.3. The Parties agree that this Agreement shall automatically terminate upon the successful completion of the Housing Unit and delivery of Certificate of Completion to the Beneficiary.

12. GOVERNING LAWS

This Agreement shall be governed by the laws of Nepal. In the event of any disputes under this Agreement; the Parties shall attempt to settle such disputes by mutual discussions on good faith basis. In the event such disputes cannot be resolved within 15 days, the same shall be referred to the competent court of Nepal having jurisdiction over the matter.

FOR AND ON BEHALF OF SOH	FOR AND ON BEHALF OF Beneficiary
Signature: _____	Signature: _____
Name: _____	Name: _____
Title: _____	Title: _____
Date: _____	Date: _____

Witnesses:

1. Signature: _____

Name: _____

2. Signature: _____

Name: _____

15.4 House handover agreement

House Handover Agreement Letter

THIS AGREEMENT FOR THE handover of the houses after completion dated on _____ (the "Agreement"), is entered in between, Shangri-La Orphanage Home, a Non-Governmental Organisation (NGO) organised and registered in accordance with laws of Nepal having its office at Chapagaon, Lalitpur hereinafter referred to as the "First Party" and _____, aged __, habitant of _____ District, _____ Municipality/VDC Ward No __, a house owner hereinafter referred to as the "Second Party".

Therefore, now the both parties are agreed to fulfill the terms and condition set forth herein bellows:

1. First and second party has approved and accepted that the reconstructed new houses over 'Anti earthquake Technology' through Shangri-La Reconstruction Project which were collapsed / damaged by the earthquake of 2072/01/12 and aftershocks are appropriate to handover.
2. According to 1st point and as per the first party's request to accept the house in its usual condition after completion, the second party has agreed and accepted the house in today's date.
3. According to 2nd point after the second accepted the house, first party will have no any responsibility regarding the house.
4. The second party will be liable for repairing/painting or internal/ external decorations to the house.
5. In case of collision of house again after the natural calamities in future, first party will bear no any accountability and responsibility; but within the interval of 6 months of handover, the construction consultancy company, _____ [name of company] will be liable for maintenance.

First Party

Second Party

Witness:

1. _____

Dated: _____

15.5 Finance

Financial Status-September 30, 2016		
Description		Amount (Rs)
A. Sources of Funds		
Grants Received from GDAA & Shangrila Association, Switzerland	64,425,123.06	
Grants Received from Usthi Foundation, Switzerland	20,563,754.35	
Interest Income	<u>267,904.45</u>	85,256,781.86
Payables-Vendors		59,962.62
Payables-SOH other Projects		2,562,093.00
Total (A)		87,878,837.48
B. Application of Funds		
B1. Application as Expenses		
Admin Costs		
Staff Salary	1,614,454.72	
Office Rent & General Supply	471,443.50	
Professional Expert fees / Legal Expenses	1,095,256.00	
Meeting & Travelling Expenditures	849,035.50	
Communication/Stationery Expenses & Other Expenses	218,796.32	
Office Set Up Expenses	<u>1,076,429.00</u>	5,325,415.04
Emergency Relief (ERF)	-	557,210.00
HUB Lalitpur		
Hub Construction Expenses	91,588.00	
Wash Training	87,193.22	
Transportation & other Expenses	<u>76,503.00</u>	255,284.22
Reconstruction Homes- Lalitpur		
Construction Expenses-Material, Labor & Electrification	32,535,198.67	
Construction Supervision Expenses	3,872,836.00	
Salary Field Staff	297,983.87	
Skill Training Lalitpur	562,458.00	
Transportation/Travel Expenses	1,478,847.00	
Construction tools	776,369.00	
Ecosan & Smokeless Stove	227,142.00	
Storage ,Rent & Other Expenses	<u>229,964.00</u>	39,980,798.54
HUB Makwanpur		
Hub Construction Expenses	213,914.84	
Wash Training	291,313.00	
Transportation & other Expenses	<u>206,781.00</u>	712,008.84
Reconstruction Homes- Makwanpur		
Construction Expenses-Material, Labor	29,722,753.30	
Construction Supervision Expenses	4,339,692.00	
Salary Field Staff	466,000.00	
Skill Training Makwanpur	473,462.00	
Transportation/Travel Expenses	1,407,344.00	
Construction tools	118,320.00	
Food for Workers	549,996.00	
Ecosan & Smokeless Stove	583,174.00	
Storage ,Rent & Other Expenses	<u>407,902.00</u>	38,068,643.30
Miscellaneous Expenses	<u>612,613.50</u>	612,613.50
B2. Bank Balance		
Usthi Foundation	4,029.14	
GDAA	<u>2,362,834.90</u>	2,366,864.04
Total (B)		87,878,837.48

15.6 Guideline for focus group discussions

Guideline for focus group discussions	
For moderators / SRDP staff	
Topic	Details
Basics	<p>Focus group discussions (FGDs) are an instrument for feedback between beneficiaries and project staff, a method of qualitative research with a strong bias on dialogue. They are guided discussions with a clear target, but no question-and-answer game.</p> <p>An FGD is an interview with a group of 5 to 10 participants which is conducted in an informal and natural way, so that participants feel at ease and not under pressure.</p> <p>Participants benefit from each other as they respond to each other's ideas and build on each other's views. Thus group synergies will be released and the outcome is an interaction result, deeper insights can be gained.</p> <p>Focus group discussions are implemented to analyse the level of satisfaction of the ODHR beneficiaries as well as cultural and social appropriateness.</p> <p>In the context of SRDP, they are part of a triangulation method of an internal participatory evaluation.</p>
Preparation	<ul style="list-style-type: none"> • place: has to be reached easily by all participants • time: convenient for all participants • duration: 1-2 hours • incentives: snacks, drinks • invite participants at least three days in advance and remind them a day earlier • if possible two moderators (the main moderator should focus on the questions / that all topics are covered, the other one ensures that it runs smoothly, that nobody is overlooked etc.) • one person is responsible for recording / making notes
Introduction	<p>During the introduction the moderator points out basics of group discussions, such as respectful treatment of others, letting others finish, respecting other opinions. It is important that the moderator creates a friendly, open atmosphere, so that participants do not hesitate to offer their opinions. The moderator explains, that the FGD takes place so that SRDP will learn about the participants' perceptions and opinions, there are no wrong answers, disagreeing is accepted as well as changing one's mind. Everybody is invited to respond to each other.</p>
During the discussions	<ul style="list-style-type: none"> • Everything is being recorded (participants' quotes are important). • Each participant has to have the chance to speak freely. • The moderator pays attention that no one dominates and/or influences others too much. • The moderator probes to clarify if answers are too general, asks to explain or to give an example. • At times the moderator may move the discussion along, if discussions take very long. <p>The moderator interferes if the discussion moves away from questions.</p>

Questions	<p>Topic: HOUSE</p> <ul style="list-style-type: none"> • Is your new house what you expected? Better? Worse? • Compare the situation right after the earthquake to now. What changes do you see in your family's life? • If SRDP hadn't supported you, would you have built a house on your own? If yes: would it be earthquake-proof? If no: where would you live now? (old half-destroyed house, tarpaulin shelter, cow shed, relatives' house, other?) • Which kind of changes or additions did/will you make to the house? <p>Topic: ODHR</p> <ul style="list-style-type: none"> • Do you feel a sense of <u>community</u> with the other house-owners? Has your community changed? • Did you work on other sites? I.e. was there a <u>rotation</u> system in your cluster (or did you only work on your own house)? If yes, did you like it? • How high was your own <u>contribution</u> to your house workwise? And how much was done for you by others? <p>Topic: SUPPORT</p> <ul style="list-style-type: none"> • What do you think about the support of SRDP staff and site engineers? <p>Topic: MATERIALS</p> <ul style="list-style-type: none"> • MP: What do you think about the procurement of the materials? • LP: What do you think about the delivery of the materials?
The end	<p>The moderator asks the participants if there is anything else they would like to share with SRDP staff.</p> <p>The moderator thanks the participants for their feedback.</p>

15.7 Questions of key informant interview

1. What was your team / role when you worked for SRDP?
2. How old are you?
3. How long have you been fully involved in the project (between kick-off workshop in May 2015 and completion in August 2016)?
4. What do you think are the most positive results of SRDP?
5. What was most surprising for you during the implementation?
6. What do you regard as the biggest challenge of the project?
7. This project answered the real needs of the beneficiaries. Do you agree/disagree?
8. What further support would be beneficiary for the HOs?
9. The project could be replicated / scaled up elsewhere. Do you agree/disagree?
10. What were the A) success factors and B) main hindrances/challenges in the project management?
11. Regarding teamwork: A) What was very good and B) What should have been improved?
12. What is the first thing A) you would do the same again and B) what would you do differently the next time?
13. At those times when the project implementation seemed very difficult / challenging / frustrating, what helped best to overcome this phase?
14. What were the main risks in the implementation? Please subdivide into: A) Anticipated risks B) Actual risks.
15. How have project managers handled their work and risks?
16. How was the expertise and quality of work of engineers / site engineers?
17. Was the data collection sufficient? If not: what should have been improved?
18. How was the support and leadership of the boards?
19. How were the decisions of the boards in conferences, workshops and field visits?

20. Were the decisions of the boards implemented in time (i.e. wood procurement, labour payments, completion of Deutis/Dushrang as top priority, utilisation of finance management tools, self-contribution clarified after stage 2)? If not, would there have been any difference (positive/negative) if they would have been implemented in time?
21. The project was accepted and supported by local authorities and other stakeholders. Do you agree/disagree?
22. Men's and women's needs were addressed in the project design. Do you agree/disagree?
23. The project had some empowering effect on marginalised people. Do you agree/disagree?
24. SRDP did generate economic benefits for other people. Do you agree/disagree?
25. SRDP did generate social cohesion among the people because of ODHR and the rotation system. Do you agree/disagree?
26. The house design is sound from an engineering or technical point of view. Do you agree/disagree?
27. The structural design of the houses is generally appropriate to withstand natural hazards. Do you agree/disagree? (e.g. existence of plinth and ring beam, appropriate proportions of walls, correct distances between doors, windows and corners, appropriate fixation of roof, strength of corners etc.)
28. The design allows house extensions. Do you agree/disagree?
29. The building / house design can easily be reproduced by locals. Do you agree/disagree?
30. The use of materials was appropriate, regarding their accessibility at the sites. Do you agree/disagree?
31. The national standards, rules and regulations have been addressed, not only project-based standards. Do you agree/disagree?
32. The foundation is of appropriate depth and width as per soil conditions. Do you agree/disagree?
33. The foundation is protected from water damage. Do you agree/disagree?
34. There is enough cross-ventilation and protection from rain and sun to ensure comfortable conditions. Do you agree/disagree?
35. There is a risk of indoor smoke, ash and cinders? Do you agree/disagree?
36. The selection of skilled / unskilled labour was appropriate. Do you agree/disagree?
37. The construction of structural elements closely supervised. Do you agree/disagree?
38. There were critical inspection / verification hold points in the supervision as well as random inspections. Do you agree/disagree?
39. The procurement system was cost-effective. Do you agree/disagree?
40. The project (house design and costs, honorary contribution of experts and boards, procurement, admin costs) was cost-effective. Do you agree/disagree?
41. What could have been done to make the project more cost-effective (i.e. cheaper)?
42. The financial monitoring system was sufficient. Do you agree/disagree?
43. The developed/ forced management tools and structures of the boards and controllers were helpful. Do you agree/ disagree? Examples: house criteria-rating , house log file, integrated meetings, division of teams in January 16 in LP/ MP, procurement planning tool, training methods / checklists, Master BoQ, construction stage visit tools, metal boxes with field folders, open task/ to do lists, conference / meeting structures).
44. We used the right tools and formats for financial monitoring. Do you agree/disagree?
45. What could have been improved in the finance management? A) from your side B) regarding tools, instruments, structures.
46. The construction sites' topographic and physical features and potential risks were properly analysed prior to reconstruction. Do you agree/disagree?
47. The project included measures to lower any negative environmental impact of the project. Do you agree/disagree?
48. There was a special focus on implementing a sanitation solution. Do you agree/disagree?
49. Recycled materials were used. Do you agree/disagree?
50. SRDP was an Owner Driven Reconstruction despite the difficult circumstances (time, aftershocks, late guidelines of the government, blockade of the border). Do you agree/disagree?

15.8 House completion report (example)

SRDP House Completion Report Kalikatar

Personal Data - House Owner		Houselogfile Nr.: M01.33
First name, family name		Sano Kancha C.
Sex		M
No. of family members in the household		8
Number of children	Girls	1
	Boys	5
Other family members in the household		-

Selection Criteria		
Social status		community member
Economic situation		poor subsistence farmer
Health status		good
Female / male headed family		male headed
Ethnic / caste group		Chepang
Condition of the affected house		partially affected

<p>A) Information about the situation after EQ 1 and 2 (2-3 sentences only)</p> <p>The whole family inside house during the first EQ, the wife was cooking food. They rushed out immediately grabbing a few important things and ran away from the house. Some walls broke down, but nobody got hurt, even the animals were fine.</p>
<p>B) Information about the family and their socio-economic situation</p> <p>There are five sons aged 13, 11, 10, 9 and 1 ½ (yes, quite an afterthought), and one daughter, 14 years old. As almost all MP beneficiaries the HO owns some farm land, but the crops only feed the family for half a year, so when there is not much farming to be done he goes to Hetauda or Manahari to look for jobs as an unskilled labourer. His brother Thulo Kancha is a beneficiary as well, their houses are side by side.</p>
<p>C) How was their participation during construction/ODHR (2-3 sentences only)</p> <p>First the HO did not want a house, but then his brother, living next door, was selected to be a beneficiary and this changed his mind. He was happy when he was selected as well. Nevertheless in the beginning he was hardly ever at home, but working elsewhere, and didn't participate much. However, this changed soon and then he participated well in the construction.</p>
<p>D) Information about house completion/handover. Did they move from emergency shelter to the house already? Any happy moments/expressions ☺ (3-4 sentences)</p> <p>The HO very satisfied and happy now whereas he was quite unsure before how the new house would be, but he feels very comfortable. He is impressed having so much space to live in now. For him, such a house would never have been affordable, so the house is very precious for the family.</p>

Attachments:

- ☒ **Picture 1:** Destroyed/ old home after the EQ with Sano Kancha's wife
- ☒ **Pictures 2a:** During construction: picture of house, **2b** HO
- ☒ **Picture 3:** Family in front of the completed house



Impressions

Individual House owner reports and pictures on our website: <http://waisenkind.de/hp2/index.php?nr=G1.5>

Lalitpur



Makwanpur



Milestones “Lets reconstruct it” Workshop Kathmandu and breakthrough in Makwanpur



Teamwork and distribution of HO Materials



Integrated Meetings and Workshops as success factors to reduce complexity and communication gaps



Visualization of correct / incorrect constructions techniques - Awareness formation and practical tools for homeowners at every construction site

भुक्तम् प्रतिरोधात्मक घर निर्माणका लागि ध्यान दिनु पर्ने कुराहरु

गिट्टी : धुलो नमिसिएको , २० मि मि साईज सम्मको मात्र

२० मि.मि. भन्दा बढी (X) २० मि.मि. सम्मको (✓) २० मि.मि. भन्दा बढी (X) २० मि.मि. सम्मको (✓)

इटाको गाह्रो : सिमेन्ट मसला इटा जोर्निमा १० मि. मि. सम्म तर २० मि.मि. भन्दा बढि हुनु हुदैन ।

२० मि.मि. भन्दा बढी (X) १० मि.मि. सम्म बाध (✓) २० मि.मि. भन्दा बढी (X) १० मि.मि. सम्म बाध (✓)

ईटाको गाह्रो लगाउदा देखिएका गल्तीहरु :

ईटाको गाह्रो लगाउदा देखिएका गल्तीहरु (X) (X)

ढुङ्गा : धुलो नमिसिएको , ठुलो तथा फराकिलो

धेरै सानो ढुङ्गाहरु (X) माटो मिसिएको ढुङ्गा (X) प्रयोग गर्न मिल्ने ढुङ्गाहरु (✓) प्रयोग गर्न नमिल्ने ढुङ्गाहरु (X)

बालुवा : गाह्रो लगाउदा बालुवा राम्रो हुनु पर्छ माटो वा धुलो मिसिएको हुनु हुँदैन

इटाको गाह्रो लगाउदा बालुवा चालेको हुनु पर्छ (X) राम्रो ढुङ्गाहरु (✓) प्रयोग गर्न नमिल्ने ढुङ्गाहरु (X)

फलाम बुन्ने काम : रिडहरु एक आपसमा १५० मि.मि. विचमा

१५० मि.मि. विचमा नभएको (X) १५० मि.मि. विचमा भएको (✓) राम्रो ढलान भएको (✓) राम्रो ढलान नभएको (X)

सिमेन्ट गिट्टि र बालुवाको मिश्रण

पि.सि.सि	१:२:४ (सिमेन्ट : बालुवा : गिट्टी)
ढुङ्गाको गाह्रो	१:६ (सिमेन्ट : बालुवा)
इटाको गाह्रो	१:४ (सिमेन्ट : बालुवा)
आर.सि.सि. कङ्क्रिट	१:१.५:३ (सिमेन्ट : बालुवा : गिट्टी)

हाम्रो सकल्प नयाँ नेपाल मा बाँसियो तथा भुक्तम् प्रतिरोधात्मक संरचना निर्माण



- Nepal will rise again – Change starts with you -