

SECTOR PLANS AND FINANCIAL PROJECTIONS

Working Documents

NEPAL EARTHQUAKE 2015



May 2016

Introduction

The Post Disaster Recovery Framework (PDRF) provides detailed guidance on the reconstruction policy framework, institutional framework, implementation arrangements and financial arrangements that the Government of Nepal will follow over the next five years, with regard to post-2015 earthquake recovery and reconstruction. The Post Disaster Needs Assessment (PDNA) following the earthquake had identified damage and loss and recovery needs across 23 sectors, including cross cutting issues.

Recovery and reconstruction priorities defined

Building on the PDNA, the PDRF has prioritised recovery requirements across 19 sectors, including six cross-cutting issues. These are:

- Social sectors: Cultural Heritage; Education; Health; Nutrition; Rural Housing and Community Infrastructure; Urban Housing and Settlements.
- Productive sectors: Agriculture, Irrigation and Livestock; Tourism; Environment and Forestry
- Infrastructure sectors: Electricity and Renewable Energy; Transport, Access and Communications; Water, Sanitation and Hygiene; Government Buildings.
- Cross-cutting sectors: Disaster Risk Reduction; Employment and Livelihoods; Social Protection; Gender and Social Inclusion; Governance; Social Protection.

Each sector has prepared sector plans that are aligned with the strategic recovery vision of the Government of Nepal. The purpose of the sector plans is to articulate strategic sector programmes and to prioritise the financial requirements for the sector, based on identified criteria. These requirements will form the basis for the funding allocations to be made from the National Reconstruction Authority to each sector. In the process, each sector has reviewed, and where possible, updated the data that has become available since the PDNA. Surveys and assessments have taken place in many sectors, which have resulted in some changes and increases in the estimation of recovery needs. The analysis has also provided an opportunity for detailed re-assessment in certain sectors; for example, in both rural and urban housing and settlements, where adjustments to earlier PDNA assessments have been made.

The sector plans explain how the priority programmes will be implemented. Almost all the Government Ministries have expressed the need for, as well as budgeted for, project implementation units to manage the delivery of the recovery and reconstruction programme. All sectors have stressed the need for capacity-building and training of existing personnel. Key cross-cutting issues have been highlighted within their own respective sector plans, but have also been addressed in every sector. Each sector has prioritised Building Back Better, so that reconstruction and recovery are risk-informed and sustainable.

A collaborative effort

The sector plans have been prepared through an almost two-month long intensive and participatory exercise. Each sector team was led by a relevant Government Ministry and development partner agency. Each Executive Committee Member from the NRA was responsible for different thematic areas and supervised the work of the sector teams. A number of international and bilateral agencies, NGOs and private sector partners participated in the sector

teams. Efforts were made to collect data from district level consultations. Sector leads regularly met with the NRA and the PDRF Core Group for guidance and review. Their draft sector reports were also shared for external review for expert comments.

The sector plans are a product of the collaborative efforts of key stakeholders in Nepal. Since some sectors span across different Government Ministries and agencies, there is a need for ever-stronger coordination and collaboration, while further work is required to fully reflect the role and contribution of the private sector in recovery and reconstruction. While the sector plans are largely a reflection of the Government's reconstruction and recovery efforts, they do include the contributions of many partners.

Works in progress

It should be emphasised that these plans are all works in progress. As with any planning process, plans will continue to evolve and will require further adjustments as progress is achieved, further assessments are made and priorities are adjusted to reflect mid-course corrections and future resource availability. A few sector plans have yet to be finalised. These include: Commerce and Industry; the Financial Sector; and Communications. They will be incorporated as they become available.

Moving forward, the sector plans provide an excellent basis for planning and implementing post-earthquake recovery and reconstruction. The next step is to incorporate more fully into each plan a monitoring framework, which will facilitate the ongoing assessment of progress and resolution of constraints.

The NRA, in collaboration with Government Ministries and agencies, sub-national administrative bodies and partner organisations, will facilitate periodic review and revision of sector plans, to ensure that they remain relevant, are adapted as required and continuously capture progress.

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ACRONYMS

ADB	Asian Development Bank
ARC	Area Resource Centre
BMS	Breast Milk Substitutes
CBS	Central Bureau of Statistics
CCR	Community Committee for Reconstruction
CAC	Citizens Awareness Centre
CMR	Child Mortality Rate
CNW	Child Nutrition Week
CSO	Civil Society Organisation
CMR	Child Mortality Ratio
CNW	Child Nutrition Week
CGI	Corrugated Galvanised Iron
CBS	Central Bureau of Statistics
CL-PIU	Central Level Project Implementation Unit
CBO	Community Based Organisation
CSO	Civil Society Organisation
CDO	Chief District Officer
DTO	District Technical Office
DDC	District Development Committee
DFID	Department for International Development, UK
DWASHCC	District Water Supply, Sanitation and Hygiene Coordination Committee
DHO	District Health Office
DHM	Department of Water Induced Disaster Prevention
DSCWM	Department of Soil Conservation and Watershed Management
DDRC	District Disaster Relief Committee
DSCWM	Department of Soil Conservation and Watershed Management
DDRC	District Disaster Relief Committee
DOLIDAR	Departments of Local Infrastructure Development and Agricultural Roads
DUDBC	Department of Urban Development and Building Construction
DSCWM	Department of Soil Conservation and Watershed Management
DDRC	District Disaster Relief Committee
DL-PIU	District Level Project Implementation Unit
DoHS	Department of Health Services
DRR	Disaster Risk Reduction
DDC	District Development Committee
DHO	District Health Office
DRM	Disaster Risk Management
DWSS	Department of Water Supply and Sewerage
DMG	Department of Mines and Geology
EDP	External Development Partner
EOC	Emergency Operation Centre
EU	European Union

FCHV	Female Community Health Volunteer
FY	Fiscal Year
ICS	Improved Cooking Stove
IFA	Iron-Folic Acid
IMC	International Medical Corps
F100	Formula 100
F75	Formula 75
FCHV	Female Community Health Volunteer
FY	Fiscal Year
GIS	Geographical Information System
GIZ	German Society for International Cooperation
GLOF	Glacial Lake Outburst Floods
GoN	Government of Nepal
GRB	Gender Responsive Budgeting
HEOC	Health Emergency Operation Centre
HF	Health Facility
HFOMC	Health Facility Management and Operation Committee
HHC	Himalayan Health Care
HMIS	Health Management Information System
HP	Health Post
HW	Health Worker
MICS	Multiple Indicators Cluster Survey
ICIMOD	International Centre for Integrated Mountain Development
IDA	International Development Association (World Bank)
IFA	Iron-Folic Acid
IMC	International Medical Corps
IOM	International Organisation for Migration
IYCF	Infant and Young Child Feeding
ILO	International Labor Organisation
I/NGO	International/Non-Governmental Organisation
JICA	Japan International Cooperation Agency
KF	Karuna Foundation
KUKL	Kathmandu Upatyaka Khanepani Limited
KVDA	Kathmandu Valley Development Authority
KOICA	Korean International Cooperation Agency
LRC	Local Resource Centres
LAPA	Local Adaptation Plan of Action
LDO	Local Development Officer
LWF	Lutheran World Federation
MAM	Moderate Acute Malnutrition
MDG	Millennium Development Goal
MICS	Multiple Indicator Cluster Survey
MISP	Minimal Initial Service Package
MIS	Management Information System
MIYCN	Maternal Infant and Young Child Nutrition
MNCH	Maternal Newborn and Child Health
MNP	Micronutrient Powder
MoH	Ministry of Health
MoWSS	Ministry of Water Supply and Sanitation
MoE	Ministry of Education
MWASHCC	Municipal Water Supply, Sanitation and Hygiene Coordination Committee

MoFALD	Ministry of Federal Affairs and Local Development
MoU	Memorandum of Understanding
MoHA	Ministry of Home Affairs
MoCTCA	Ministry of Culture, Tourism and Civil Aviation
MSNP	Multi Sectoral Nutrition Plan
MoWCSW	Ministry of Women, Children and Social Welfare
MSME	Micro, Small and Medium Enterprises
MTOT	Master Training of Trainers
MoLE	Ministry of Labor and Employment
MoUD	Ministry of Urban Development
NEA	National Electricity Authority
NPC	National Planning Commission
NGO	Non-Governmental Organisation
NSC	National Seismological Centre
NHSSP	Nepal Health Sector Support Program
NRA	National Reconstruction Authority
NSDRM	National Strategy for Disaster Risk Management
NRRC	Nepal Risk Reduction Consortium
NSET	National Society for Earthquake Technology
OHWW	One Heart World Wide
ODF	Open Defecation Free
ODR	Owner Driven Reconstruction
OBA	Output-Based Aid
PASSA	Participatory Approach to Safe Shelter Awareness
PCO	Project Coordination Office
PDNA	Post Disaster Need Assessment
PDRF	Post Disaster Recovery Framework
PHCC	Primary Health Centre
PIS	Personal Information System
PIU	Project Implementation Unit
PMU	Project Management Unit
PLW	Pregnant and Lactating Women
PLWD	People Living with Disabilities
PPICD	Policy, Planning and International Coordination Division
RCIW	Rural Community Infrastructure and Works
RH	Reproductive Health
RCC	Reinforced Cement Concrete
RUSF	Ready to Use Supplementary Food
RUTF	Ready to Use Therapeutic Food
SAR	Search and Rescue
SAM	Severe Acute Malnutrition
SC	Save the Children International
SDC	Swiss Agency for Development and Cooperation
SDP	Sector Development Goals
SDG	Sustainable Development Goals
SFDRR	Sendai Framework for DRR
SME	Small and Medium Enterprise
SONA	Society of Nepalese Architects
SOP	Standard Operating Procedures
TA	Technical Assistance
TB	Tuberculosis

TDF	Town Development Fund
TIMS	Trekkers' Information Management System
ToT	Training of Trainers
UNICEF	United Nations Children's Fund
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund
USAID	United States Agency for International Development
VDC	Village Development Committee
VWASHCC	Village Water Supply, Sanitation and Hygiene Coordination Committee
WASH	Water, Sanitation and Hygiene
WB	World Bank
WCF	Ward Citizens Forum
WHO	World Health Organisation
WV	World Vision
WSSDO	Water Supply and Sanitation Divisional Office
WTTC	World Travel and Tourism Council



SOCIAL SECTORS

Cultural Heritage

Education

Government Buildings

Health and Nutrition

Housing and Settlements (Rural)

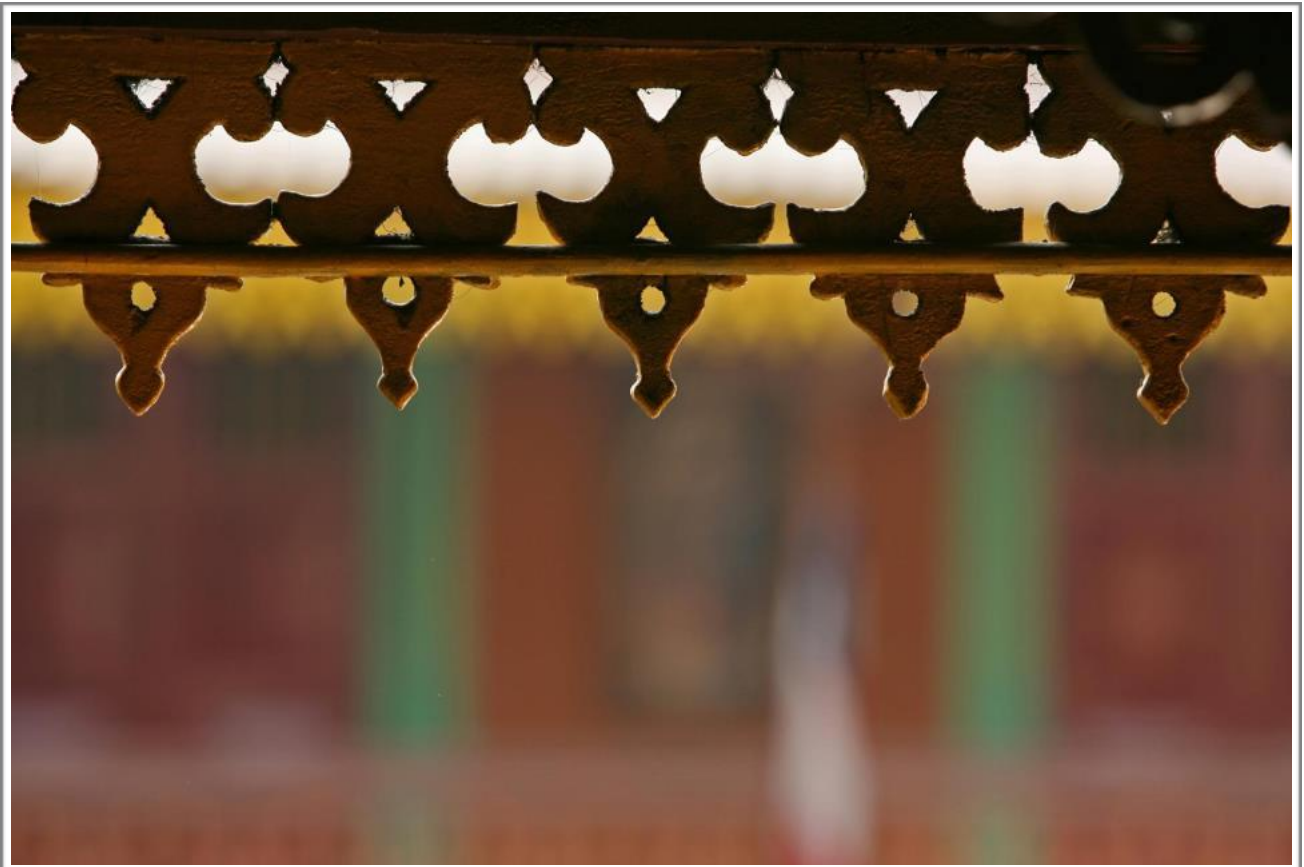
Housing & Settlements (Urban)



Sector Action Plan (SAP)

Cultural Heritage

Post-Disaster Recovery Framework, 2073



May 2016

CULTURAL HERITAGE

1. Situation Analysis

The 25 April 2015 earthquake and the subsequent aftershocks have had a major impact on cultural heritage. Hundreds of monuments collapsed and many were badly damaged including palaces, temples, monasteries, chaityas, bahals, sattals and patis. Entire historical settlements were destroyed, cultural artefacts and elements from monuments and historic houses displaced. The destruction also had repercussions on the intangible heritage, which includes festivals, daily rituals, as well as the traditional way of living that characterises Nepal. Now, not only the classified heritage must be taken care of, but also traditional settlements, along with local customs and lifestyle, need to be restored throughout the affected districts.

The potential long-term impact of the destruction of the earthquake would be the loss of vulnerable tangible and intangible heritage that is not identified and safeguarded. The displacement of communities and the reconstruction of dwellings could lead to the loss of identity of traditional and historic settlements. The threat exists of loss of minor monuments and rituals.

The impact of the earthquake is, however, also an opportunity to test the resilience of traditional communities and of the cultural heritage. The long-term impact would be rejuvenated communities with renewed involvement in the care and maintenance of their traditions and heritage. Reconstruction will also lead to the renewal - and in some cases revival - of traditional skills. The tourism industry can also be further developed, by promoting the rehabilitation and restoration process as a tourism product. The opportunity must be taken seriously and integrated into the rehabilitation process.

2. Strategic Recovery Vision for the sector

Based on the PDNA findings and recommendations, a 6-year recovery period was identified for the complete recovery of approximately 2,000 damaged or collapsed monuments, monasteries and temples in 16 districts. However, the targets for the initial 6-year recovery period will be reviewed, giving equal priority to the rehabilitation of communities and their traditions.

Over the next five years, the vision for the culture sector is to restore and rebuild damaged built heritage and to safeguard the cultural continuity of the affected communities. This will require a comprehensive approach, to ensure the rehabilitation of both classified monuments and traditional living environments. This approach will also take into account the intangible dimensions of living heritage, including festivals and rituals, and traditional cultural expressions. The rehabilitation of the culture sector must ensure that communities have the motivation and means to rise from the emotional and physical pain. These dimensions will be closely linked to safeguarding the knowledge and promoting the skills required to ensure cultural continuity.

The rehabilitation of the heritage sites, historic settlements, monuments and traditional houses must ensure cultural continuity by maintaining the original design, materials, building technology and traditional craftsmanship. In most cases, the process involves re-assembling traditional structures.

Due to a limited number of artisans, specialised skilled labourers and quality materials, the work must be done in a phased manner. Capacity building is a critical part of this process. Projects will be prioritised, primarily based on the need to stabilise damaged buildings, before beginning with the reassembling of totally collapsed structures. In addition to the World Heritage list, attention will be given to the smaller and significant monuments. Conservation of artefacts and safeguarding of museum collections will start as soon as possible, preferably under the guidance of specialists in the field of metal, wood, ivory and painting restoration.

The Department of Archaeology as the main custodian and implementing government agency will retain its authority in planning, managing and supervising the rebuilding and restoration process. This will include carrying out necessary investigations, research, defining guidelines and procedures, including ensuring appropriate quality control mechanisms. The implementation of the rehabilitation process will, to a large extent, include local stakeholders, ensuring local community participation in the rebuilding of heritage sites and monuments. Rehabilitation is not solely about reconstruction; it is a gradual healing process.

3. Current status of ongoing recovery efforts in the sector

Considering the importance of ensuring acceptable approaches to the restoration of heritage sites, monument and objects, the **legal framework** has been discussed and finalised. While the National Reconstruction and Rehabilitation Policy lays the foundation, the Department of Archaeology has adopted the "Post Disaster Conservation Guidelines 2072" and has prepared "Post Disaster Rehabilitation Procedures 2072" to provide specific guidance on the restoration of cultural heritage sites and monuments.

The Earthquake Response Coordination Office (ERCO) was established at the Department of Archaeology with financial assistance from UNESCO and technical support from ICOMOS Nepal. An overall **rehabilitation strategy** for the culture sector has been prepared which is comprised of five main categories of approaches: (1) legal, (2) research (3) planning (4) project preparation and (5) data management.

Detailed **assessments** are still being carried out on all the historic sites, monuments and displaced cultural objects. Protecting and covering vulnerable monuments as protection from the monsoon and providing necessary shoring, propping and temporary stabilisation were carried out.

Research includes archaeological investigations, material testing, structural assessments as well as geological investigations for particular sites. The salvaged materials have been identified, inventoried and stored or exhibited in a secure manner, for example in Hanuman Dhoka and Patan Durbar Square. Various artefacts have been moved to museums and therefore the museums will need to be supported for improved conservation activities and storage. The identification, assessment and conservation strategy for murals has been implemented along with training. This is continuing particularly for the Shantipur murals being addressed at the national museum.

Planning at site level has mainly focused on the seven monument zones of the Kathmandu Valley **World Heritage** property and the sites on the World Heritage Tentative List. The coordination of the monument zone of the Kathmandu Valley World Heritage property has been established through the Integrated Management Plan (IMP) along with the Coordinating Working Committee (CWC). Each monument zone has its own local management structure, which would be the basis for rehabilitation. In most cases the local site managers will be able to deal with the rehabilitation, with special support from NGOs or directly through the Department of Archaeology.

Rehabilitation coordination plans are being prepared for World Heritage **Tentative List** sites that were greatly affected such as "Vajrayogini and the early settlement of Sankhu", "Khokana, the vernacular village and its mustard-oil seed industrial heritage", "Nuwakot Palace Complex" and "The medieval palace complex of Gorkha". Some seismic impact has been identified on the two sites of "Medieval Earthen Walled City of Lo Manthang" and "Cave architecture of Muktinath Valley of Mustang".

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Initial discussions and an international workshop have been carried out to establish a **database**. The database is to help manage data on heritage sites, historic settlements, monuments, traditional houses and cultural objects; it is intended to be accessible for use in the rehabilitation planning process.

Despite many hardships inflicted on the people, among the traditions that are being reinstated and links that are being re-forged, are the three defining **festivals** in Kathmandu (Indra Jatra), Patan (Rato Machindranath Jatra) and Bhatapur (Bisket Jatra) as they are part of the identity of the inhabitants and their faith. All the year-round festivals have been celebrated. The past months after the earthquake saw local people very concerned and fully involved in keeping their cultures alive.

4. Expected sector results and indicators

Detailed restoration projects have been listed in the **attached chart** with estimated costing indicating year of implementation. The results and indicators for each of these projects would be the **completed restoration or reconstruction of the monuments**.

Each of these projects must follow the prescribed procedures. They will require progress reports and justification of compliance at each step of the defined stages. The stages and steps of the "Rehabilitation Procedures 2072" document will be considered as a **mandatory checklist for all projects**. The procedures also are aligned with the Rehabilitation Strategy prepared by ERCO with support of ICOMOS Nepal. The procedures are also aligned with the "Reconstruction Guidelines 2072", which have been adopted by the Department of Archaeology.

Assessing progress and achievements of rehabilitation and safeguarding of intangible heritage require a different set of indicators that appraise continuity. The vulnerable intangible cultural heritage impacted by the earthquake needs to be identified. Indicators for intangible heritage are the **continued practice, performance and implementation** of cultural activities.

5. Priority recovery programmes

Criteria for prioritisation

The activities for rehabilitation and restoration works for heritage sites, historic settlements, monuments and displaced cultural objects would need to be prioritised and follow **standardised rehabilitation procedures**. The procedures define three stages with the mandatory steps of (1) documentation / assessment / research, (2) design / planning and (3) appropriate implementation and monitoring. All activities would be prioritised based on these procedures.

Prioritisation has been given to salvaging and safeguarding the cultural heritage that is still threatened and could further deteriorate or get lost. This means that the focus would be on repair and maintenance of damaged structures before the reconstruction of collapsed monuments. Prioritisation has also been given to the salvaging of important elements of collapsed structures.

The prioritisation of projects has considered the **holistic approach to rehabilitation**. This means that not only the tangible, but also the intangible heritage must be safeguarded. The balance between the rehabilitation of classified and non-classified, as well as cultural heritage within the Kathmandu Valley and outside the valley, are considered.

Prioritised Programmes

The planned programmes are based on the overall rehabilitation strategy and assessments that were initially provided in the PDNA and further elaborated. The elaboration of the funding and time schedule is provided in the attached charts.

The rehabilitation strategy defines that implementation will require a clear institutional, legal and economic frameworks and procedures to ensure a systematic and phase wise rehabilitation of the tangible and intangible heritage. To ensure smooth implementation such bottlenecks as overlapping decision-making, lack of artisans and materials and differences in the understanding of accepted norms for the reconstruction of cultural heritage must be removed.

Legal basis for Rehabilitation of Cultural Heritage: To ensure that there is a clear understanding of how the government authorities are going to proceed in the rehabilitation of the heritage sites, historic settlements, monuments and displaced cultural objects, a specific set of legal provisions need to be agreed upon. This would consist of a policy statement, general guidelines and standard procedures that all government authorities would need to follow. These would be the basis for decision-making and providing permission to national and international involvement within the cultural heritage sites. The legal provisions would need to be specific to the post-disaster circumstances and would therefore need to be time-bound for a given rehabilitation period. The legal provisions for the rehabilitation period would need to be reviewed at the end of the given period and either extended or dissolved.

Develop a Master Plan: The DoA, with support of UNESCO and international experts, will develop a master plan and schedule for the repair, restoration and reconstruction of collapsed and damaged monuments and sites. The master plan will be based on the comprehensive documentation of all the earthquake-affected historic structures with detailed information regarding the type and degree of damage. The master plan will state a clear sequence of and rationale for implementation. Restoration activities will be distributed between all districts, cities, and sites as evenly as possible. Priority will be given to repair and restore damaged structures before tackling ground-up reconstructions.

Post Disaster Research: This is the opportunity to ensure that we learn as much as possible about the impact of the earthquake on the cultural heritage and traditional forms of construction. This would also go hand in hand with observing and documenting the various impacts not only on the tangible but also on the intangible components of cultural heritage. Research would need to be carried out in such a way so as to ensure that the outcome can be used for practical purposes in planning rehabilitation. This means that focus of the research must be on gaining better knowledge of issues that are key in rehabilitation. The research format would also need to ensure the relevant outcome and reporting so as to be able to use this in the planning process. The research would also need to provide the scientific justification for conservation procedures.

Rehabilitation Coordination Frameworks: The objective of the RCF is to ensure a planned and appropriately phased rehabilitation of complex heritage sites which have been extensively damaged and where a coordinated effort will be required. The preparation of the RCF will be carried out through the ERCO by appropriate consultants or experts, in close collaboration with the site managers and stakeholders. The preparation of the RMP for each of the earmarked sites will be supported by funds through the DOA or UNESCO. The implementation of the RCF will be carried out by a designated site manager, under the supervision of ERCO.

Implementation Requirements: To carry out restoration and reconstruction works over the next years, several key issues would need to be dealt with in a way that ensures that they don't become

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bottlenecks. This would ensure appropriate quality and that work does not stop due to a lack of resources, expertise, skilled workers and necessary materials. The capacity for restoration and rehabilitation activities needs to be considerably improved, to be able to address the post-earthquake needs. The approaches to rehabilitation of historic settlements and dwellings must be defined and adopted.

Data Management: Considering the amount of information that was being collected after the earthquake, it was quickly found necessary to develop a functioning data management system for cultural heritage. After discussions with numerous experts, it was decided to use ARCHES as the platform for managing the data. The security of information has been a major issue. Access would need to be controlled at various levels, depending on the type of data. Once the system is set up, the various inventories and data collection can be compiled into the single database. The formatting of existing information will be required to fit the system and make it possible to easily access and search.

The **comprehensive mapping of the intangible heritage** elements is still to be carried out, with participation of the communities concerned. The in-depth assessment of the effect and extent of the impact of the earthquakes is required, both on the various manifestations of traditional cultures and also on the individual creators or practitioners - the "human treasures" - who carry the legacy of the centuries-long traditions, since this loss could even lead to the total halt to some practicing cultures. This is particularly linked with people's identity and hence should be given high consideration during assessment. A special program is required to safeguard the intangible culture of those towns or villages that need to be resettled after the earthquake.

6. Implementation strategy and risk analysis

Potential implementing partners

Government:

- Ministry of Culture, Tourism and Civil Aviation - MoCTCA
- Department of Archaeology - DOA
- Pashupati Area Development Trust - PADT
- Bauddha Area Development Committee - BADC
- Ministry of Federal Affairs and Local Development - MoFALD
- District Development Committees, Municipalities and Village Development Committees
- Ministry of Urban Development
- Department of Urban Development and Building Construction

NGOs:

- International Council on Monuments and Sites - ICOMOS Nepal
- Federation of Swayambhu Management and Conservation - FSMC
- Kathmandu Valley Heritage Trust - KVHT (NGO branch of KVPT)
- Heritage and Environmental Conservation Foundation Nepal –HECFN
- Nepal Heritage Society
- Archaeological Society of Nepal
- Society of Nepalese Architects

Educational institutions:

Close collaboration should be maintained with technical colleges such as the Institute of Engineering (TU), Kantipur Engineering College (TU) and Khwopa Engineering College (PU).

Private sector and community groups:

The private sector must be encouraged to support heritage restoration through the formation of "user-committees" who have direct involvement in the reconstruction. This ensures communities' ownership and long-term sustainability.

International community:

International partners (governmental and private) have provided major support, either by directly signing MoUs or by providing support through UNESCO or local NGOs. The following international institutions involved in research were coordinated and funded through UNESCO, in close cooperation with the national authority, DoA: Universities such as Durham University (UK), "Sapienza" University of Rome (Italy), IUAV, University of Venice (Italy). Additional research activity by the National Research Institute for Cultural Properties, Tokyo (NRICPT), together with University of Tokyo (Japan), and series of capacity-building activities by international organisations such as ICOMOS, ICOM and ICCROM, together with Institute of Disaster Mitigation of Urban Cultural Heritage at Ritsumeikan University (Japan), were organized by DoA, in close cooperation with UNESCO.

Key Issues and recommendations

A **common plan and vision** is to be developed, with clearly-defined responsibilities and a logical chain of command between NRA, NPC, MoCTCA, DoA, and also SWC (which is responsible for managing INGO and NGO inputs that go beyond immediate earthquake reconstruction). Coordination between the main authorities must be ensured through regular meetings, to review progress and clarify implementation procedures. The coordination needs to include UNESCO, to ensure that international conservation standards are applied. Rehabilitation of cultural heritage needs to be carefully planned and sequenced over the next five years. Pressure to rebuild quickly, without consideration of due processes and involvement of the community and stakeholders must be opposed. Preservation of original fabric should be prioritised over rebuilding.

The CL-PIU should be established as soon as possible. This will help with overall planning, monitoring and coordination with districts/field levels, assisted by a team of specialists with experience in both tangible and intangible heritage areas. The drafting of the envisioned reconstruction, recovery and rehabilitation plan for the cultural sector needs to be carried out in an inclusive manner that includes all major stakeholders. This should also address specific needs for recovering the Intangible Cultural Heritage (ICH) that has been impacted.

DoA requires support to hire external engineers and architects, to continue and complete necessary research, damage assessments and restoration planning. The Department of Archaeology will engage independent researchers to learn as much as possible about the impact of the earthquake on the cultural heritage and traditional forms of construction. This means that the focus of the research must be on gaining better knowledge of issues that are key in the rehabilitation process. Given the numerous tasks involved to recover the culture sector, a wide variety of outsourced experts and specialists of national and international renown will be required such as: conservationists, art historians, iconographic experts, museum experts/curators, programming and database experts, structural and seismic engineers, geologists and geotechnical experts, architects, restorers, artisans, sociologists, cultural anthropologists, ritual specialists, linguists and ethno-musicologists.

Direct **international funding** extended to specific government organisations, NGOs, cultural institutions and organisations should be encouraged and the permission process for carrying out rehabilitation work simplified with the involvement of international actors, NGOs and community groups.

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Detailed **damage and recovery assessments** are still to be carried out on numerous historic sites, monuments and displaced cultural objects. Research must include archaeological investigations, materials testing, and structural assessments as well as - for particular sites - geological investigations. Each site needs a salvage action plan, including monitoring and safeguarding by key people from DoA, who are dedicated and accountable for maintaining salvage areas. Salvaged materials must be identified, inventoried and stored or exhibited in a secure environment. Various artefacts have already been moved to museums and therefore, such spaces need to be supported to improve conservation activities and storage conditions. The identification, assessment and conservation strategy for murals has been implemented alongside training - notably for the Shantipur murals now at the National Museum.

Serious efforts are necessary to **protect vulnerable monuments** from the monsoon and to provide necessary shoring up, propping up and temporary stabilisation. There is further need for improved protection of many significant monuments and historic buildings from the impending monsoons. So far, the main focus has been on the seven monument zones of the Kathmandu Valley World Heritage Property.

Importance must be given to the **documentation, assessment and research of damaged heritage sites, monuments, and objects**. Rehabilitation interventions must be justified based on assessments and research, which will also allow improvement of knowledge on the significance and history of the heritage site, monument and object.

Reconstruction within the culture sector must be understood to be different from the reconstruction of contemporary structures and infrastructures. Regarding appropriate implementation, construction must be carried out by those who have the expertise to do so and who can ensure quality. Standard tendering procedures are not appropriate since specialised crafts-persons, materials, and procedures are required. **Pre-qualification of contractors**, identification of specialised artisans, and implementation through user-committees must be assured. A basic criterion to be considered for hiring contractors could be devised for the DoA (e.g. they must provide employment to local people and qualified artisans).

Specialised master crafts-persons and artisans must be provided special recognition by the State as carriers of the skills and knowledge required for the rehabilitation of cultural heritage. The master crafts-persons and artisans need to be reimbursed for their skills accordingly. The inclusion of artisans must be ensured. This requires specific arrangements for the identification, promotion and training of artisans. In some countries, there is a required minimum percentage of construction budgets reserved for artisans.

The government must facilitate appropriate production methods and procurement procedures for materials needed for traditional construction methods. This requires quality control and subsidies for materials such as wood and traditional bricks and tiles. If Nepal's resources are insufficient (e.g. for hard wood timber), permission for imports needs to be arranged. Strategies for the procurement and production of traditional construction materials must be developed. For example, the Nepal Timber Cooperation should make provisions to provide adequate amounts of quality hard wood and pine timber. If Nepal's market cannot meet the demand, which is likely, provisions must be made to allow importation from abroad.

The coordination within complex heritage sites and traditional settlements must be ensured through the preparation of Rehabilitation Coordination Frameworks which will be prepared in coordination and thereafter followed by all authorities and stakeholders. This is especially relevant for Hanuman Dhoka Durbar Square, Swayambhu, Changu Narayan, Sankhu, Kokhana, Nuwakot and Gorkha.

Special consideration shall be given to the rehabilitation of the monument zones of the Kathmandu Valley World Heritage Property, ensuring close cooperation with UNESCO, ICOMOS and the World Heritage Committee. For the sites on the Tentative List for World Heritage, reassessments shall be carried out to address the possible future nomination for World Heritage inscription in close collaboration with the community and local government. For each of these properties detailed rehabilitation coordination plans shall be prepared by the Department of Archaeology and external consultants, in close cooperation with the concerned local management unit or local authorities in charge.

Considering the large amount of information that has been collected before and after the earthquake, a functioning data management system for cultural heritage needs to be established. ARCHES is one such system that is being considered. Once the system is set up, the various inventories and data collections can be compiled into a single heritage management system.

The mapping of the Intangible Cultural Heritage (ICH) is still to be implemented with the participation of the communities concerned. This should be expanded in a phased manner, to cover the whole country's rich and diverse ICH. An ICH department needs to be set up and coordinated through MoCTCA with support from UNESCO. Accordingly, capacity building activities as well as community support programs are of great concern to support the ability of communities to continue or recreate traditions within their changed environments and retain their cultural identities. This also implies the need for financing of additional professional staff in MOTCA and its concerned department/division responsible for ICH.

The in-depth assessment of threatened traditions often practiced by just a few individuals - the "human treasures"—should be given priority. Preserving ICH of resettled peoples: a special program is required to safeguard the intangible culture of those towns or villages that need to be resettled. Intangible culture is recognised as part of people's cultural heritage, transmitted from generation to generation. As a consequence, communities whose cultural practices are at risk (e.g. only one master creator survives or community has to resettle into new location after the earthquake) will be given priority.

Strengthen Guthi associations by supporting smaller and regional festivals that have seen a decline due to peoples' preoccupation in coping with the effects of the disaster and a general lack of financial means. Consequently, it is of utmost importance to provide adequate financial and technical support to ensure the continuity of all cultural and religious traditions.

Cross-cutting issues

The rehabilitation of traditional settlements in synchronisation with the restoration of monuments needs to be closely coordinated between NRA, UN-Habitat, and the Department of Archaeology. There are 52 identified traditional settlements within the Kathmandu Valley and many more throughout the affected districts that require support to retain their unique identities. This also concerns the two sites on the World Heritage Tentative List that were greatly affected: the "Vajrayogini and early Settlement of Sankhu" and "Khokana, the vernacular village and its mustard-oil seed industrial heritage".

The rehabilitation of traditional settlements will ensure that **historical private houses** are conserved, consolidated and reconstructed in their original location. The traditional methods, materials and styles, as well as the layout of ancient amenities such as traditional hitis (stone water spouts) and ponds must be preserved to retain the original social and cultural fabric of the cities. Focus should not be on recreating, but rather preserving and improving, what remains of the rich history of these settlements and facilitating the communities in the continuity of their culture. The

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process of appropriate rehabilitation to improve standards of living, whilst ensuring the long term sustainability and proper construction of houses, must be ensured.

Considering that tourism is one of Nepal's prime sources of livelihood, the development of the tourism sector needs to be closely linked to the cultural rehabilitation process, more so because culture and tourism come under the same ministry. The rehabilitation of the tourism and culture sector must include the participation of community members, the business community and other stakeholders.

Community resilience

The resilience in respect to the culture sector lies with the communities and their ability and will to ensure that the rehabilitation of the cultural heritage is ensured, be it tangible or intangible. The restoration and reassembling of the historic settlements and monuments must take into account a long-term vision for maintenance and restoration. Decisions to employ engineering solutions that only consider short-term solutions of strengthening, which then cannot be reversed or elements replaced, must be prevented. In the culture sector "build back better" means ensuring that traditional technologies and materials are used to their best performance and ensure that qualitative standards are maintained.

Gender

Cultural activities developed around religion play an important role in providing support mechanisms for women and men individually and at the community level. The loss of livelihood assets centred around such activities could have a serious impact on the preservation of traditional skills in textile products, such as the traditional Dhaka cloth weaving, which is predominantly practiced by women, and metalwork done by men. The recovery process will promote preservation of such traditional skills.

Section 7. Financial requirements and planning

The total financial requirement for a full recovery estimated in the PDNA document was approximately USD 205 million. The PDNA included damage to physical assets and infrastructure (a total of 691 buildings of historic value in 16 districts, temples in remote area and the monasteries in 16 districts), impact on livelihoods estimated at 10% of damage, losses from tourist ticket sales, professional support to the Department of Archaeology, capacity building training and workshops, external technical support and 20% for the cost of recovery and reconstruction.

The PDNA document did not include all the required components mentioned in this PDRF document, which more accurately reflect actual requirements that are now prioritised as immediate, short-term and long-term responses. This document includes estimates of restoration and rebuilding of approximately 2,200 monuments as per the information collected from the Ministry of Culture, Tourism and Civil Aviation, Department of Archaeology, Guthi Sansthan, some municipalities within the Kathmandu valley and Gumba management committee. Other important components of the rehabilitation process for the next 5 years have been including in this document, including immediate protection and consolidation, preparation of legal documents, assessments, research and documentation, resource development, expert consultation, traditional materials procurement and projects for the integration of artisans, as well as long-term conservation planning of sites, monuments and objects. For the support of intangible cultural heritage, no detailed assessment has yet been conducted.

According to data collected until now from various sources cited above, a total financial requirement of approximately USD 352 million is estimated:

- Committed resources as of April 2016 amount to only NPR 2,903 million (or approximately USD 29 million).
- Additional financial requirements over the next 5 years are projected at NPR 32,328 million (or approximately USD 323 million).

The **immediate response** indicates the activities that need to be carried out in the first year, as a preparation for long-term recovery. Of the USD 0.4 million for this immediate priority, 17% of the estimated cost is committed through the government and other development partners. The **short-term response** indicates the activities that need to be carried out, mostly in first year, but continuing for the next 5 years. Of the USD 6 million estimated, only 6% of the funding is committed. The **long-term response** indicates the activities of physical reconstruction and restoration that need to be carried out in the next 5 years. Of the USD 327 million estimated, only 8% of the funding is committed.

Budget	Five Years Budget (in Million NRs)					Total Budget for five years (in Million NRs)
	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	
Recovery and Reconstruction Budget Needed	8302.13	8518.16	7569.96	5821.22	5007.42	35232.265

Projected financial disbursements by year indicated in the table above shows that the projected work targets are consistent and feasible over the five-year period.

Cultural Heritage

TABLE: FINANCIAL REQUIREMENTS FOR PRIORITY RECOVERY PROGRAMME

	2016	2017	2018	2019	2020	Total	On- budget sources	Off- budget sources	Unknown
Year									
Budget in Million NPR	7,802	8,018	7,151	5,821	5,007	33,800	2,290	585	16,411
Program									
Preparation of legal documents (Policy, guidelines and procedure)	2					2		1	1
Urgent task for all the heritage site (Protection-covering, stabilization, shoring, propping, emergency consolidation etc) - preparation for monsoon	32					32	10	2	20
Protection and shoring in Hanumandhokha Durbar square	30					30			30
Protection and shoring in Nuwakot Durbar	10					10			10
Detail existing architectural and structural drawings of all threatened/vulnerable monuments	75					75	4		71
Sorting and inventory of salvaged material in all heritage site	178					178	0	28	150
Establishment of the Rehabilitation Co-ordination Framework for 7 sites	4					4			4
Artisan mapping project	2					2			2
Material mapping project	2					2			2

Orientation for the architects and engineers of DOA regarding the restoration and rebuilding of heritage	1					1			1
Institutional Logistic development (computer, equipment, vehicles etc) of DoA	5					5	1	3	1
Institutional Human resource development (temporary appointments of professional staff engineer, archaeological officers)	17					17	16		1
Capacity building workshops	3					3			3
Co-ordinating and information unit establishment within DOA	4	2	2	2	2	11			11
Allowance for the members of the expert committee	1	1	1	1	1	3	1		1
Technical support for historic private houses	1	1	1	1	1	3			3
SUBTOTAL Immediate response (urgent task for protection before the monsoon, preparation for long-term implementation and institutional development and capacity building)	364	3	3	3	3	376	31	33	310
Detail existing architectural and structural drawings of all remaining affected monuments	30					30			30
Structural investigation of prototype monuments	30					30	3	7	20
Material investigation	10					10	2	1	7
Archaeological investigation through external consultants	30					30		5	25
Geological investigation for Swayambhu, Changu, Nuwakot and Gorkha through external consultants	10					10		3	7
Repair of reusable salvaged materials	375					375			375

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Detailed intervention design for consolidation/restoration of all threatened/vulnerable monuments	75					75			75
Artisans training and integration in rebuilding and restoration project	10	5				15	1		14
Conservation of artefacts	15	5				20		4	17
Conduction of public awareness program and trainings	6	6	6	6	6	28	1	5	22
Support for various training and discussion related to rebuilding and rehabilitation of cultural heritage	2	2	2	2	2	12		2	10
Material procurement strategie for restoration and rebuilding	1					1			1
Database (Arches and inventory of all monuments)	5	1	1	1	1	7		5	2
SUBTOTAL Short term response (Documentation, Investigation, research activities, training and awareness programs)	599	18	8	8	8	642	6	32	604
Rebuilding and restoration of 24 monuments within PMZ, Hanumandhokha	382	331	308	264	272	1,556	360	34	1,162
Rebuilding and restoration of 19 monuments within PMZ, Swayambhu	183	101	99	8		391	68	200	123
Rebuilding and restoration of 2 monuments within PMZ, Bouddhanath	2	2	2			6			6
Rebuilding and restoration of 63 monuments within PMZ, Pashupati	685	439	492	250	250	2,115			2,115
Rebuilding and restoration of 35 monuments in Kathmandu	320	331	196	206	309	1,361	598		767
Rebuilding and restoration of 10 monuments in Sankhu	44	27		30	4	106	72		34

Rebuilding and restoration of 8 monuments in Saundarijal, Nagarjun, Balampu and Thankot	67	52				119	111		8
Rebuilding and restoration of 46 monuments in Kirtipur	50	23	33	10	20	136	48		83
Rebuilding and restoration of 16 monuments in PMZ, Bhaktapur	132	128	125	84	140	609	89		521
Rebuilding and restoration of 7 monuments in PMZ, Changunarayan	10	18	8	8	8	52	10		42
Rebuilding and restoration of 7 monuments in Bhaktapur and Thimi	86	15	0	0	0	102	102		0
Rebuilding and restoration of 21 monuments in PMZ, Lalitpur	240	109	63	54	42	508	24	236	249
Rebuilding and restoration of 52 monuments in Lalitpur	172	605	37	4	4	823	263		560
Rebuilding and restoration of 11 monuments in Chapagaon, Theco and Sunakothe	54	17	8	14	33	126	62		64
Rebuilding and restoration of 8 monuments in Bungamati, Khokana and Godavari	112	9	12	8	0	141	64	50	27
Rebuilding and restoration of 10 vihar in Patan									
Rebuilding and restoration of 22 monuments in Nuwakot	214	107	82	82	82	567	135		433
Restoration and Rebuilding of 43 monuments in Kavrepalanchowk	125	50	32	30	28	265	56		208
Restoration and Rebuilding of 1 monument in Sindhupalchowk	5					5	5		0
Restoration and Rebuilding of 20 monuments in Dolakha	76	4	4	4	4	92	68		24
Restoration and Rebuilding of 14 monuments in Gorkha	84	20	11			115	66		49

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Restoration and Rebuilding of 1 monument in Okhaldhunga	5					5	5		
Restoration and Rebuilding of 4 monuments in Ramechhap	8					8	7		1
Restoration and Rebuilding of 2 monuments in Lamjung	9					9	4		5
Restoration and Rebuilding of 2 monuments in Solukhumbu	10					10	10		
Restoration and Rebuilding of 1 monument in Rautahat	1					1	1		
Restoration and Rebuilding of 1 monument in Mustang	3					3	3		
Restoration and Rebuilding of 5 monuments in Sindhuli	11	4	4	4	4	27			27
Restoration and Rebuilding of 2 monuments in Dang	28	4	4	4	4	44	24		20
Restoration and Rebuilding of 1318 monasteries (including both historic buildings-more than 100 years and less than 100 years old)	1,600	2,000	2,000	1,746	1,600	8,946			8,946
Rebuilding and restoration of of damaged 431 monuments proposed by guthi Sansthan	2,000	3,500	3,500	3,000	2,192	14,192			
Rebuilding and restoration of of 3 damaged Cultural institutions	100	100	120			320			
SUBTOTAL Longterm recovery (Consolidation, Restoration and Rebuilding of monuments)	6,816	7,997	7,139	5,810	4,996	32,758	2,253	520	15,472
DATA FROM THE MINISTRY OF CULTURE and OTHER STAKEHOLDERS (Recovery of Intangible Cultural Heritage - ICH)									
Impact on livelihood (10% of damage as per PDNA)	16					16			16

Safeguarding of Intangible Cultural Heritage (ICH) sector			
Capacity Building of community concerned practicing ICH in recovery and safeguarding	8	8	8
SUBTOTAL Intangible Cultural Heritage	24	24	24

Sector Action Plan (SAP)

EDUCATION

Post-Disaster Recovery Framework, 2073



May 2016

EDUCATION

1. Situation analysis

Although the impact of the April and May 2015 earthquakes has been devastating, the loss of life would have been far greater had the disaster taken place during a regular school day, as over one million children would have been inside school buildings that were severely damaged and collapsed. Nevertheless, education services in the affected areas were severely disrupted, impacting on enrolment, attendance and internal efficiency, leading to an increase in the number of out-of school children. Four-fifths of the damage and losses occurred in the 14 most-affected districts, while public schools accounted for 92 per cent of total damage and losses to school infrastructure.

It is crucial that all schools in affected areas are engaged in recovery efforts in line with the comprehensive school safety pillars of:

- ensuring safe learning environments
- strengthening school-level disaster management
- resilience among communities.

The recovery efforts of the education sector since the earthquakes are building on the findings of the government's Post-Disaster Need Assessment (PDNA), subsequent surveys and other recommendations, and developing the human resources needed for the country's recovery by, for example, prioritising the recovery of higher education for engineers and health workers, and technical education facilities for training masons and carpenters.

The school education sector comprises pre-primary level, basic level (grade 1-8), and secondary (grade 9-12) level and makes up around 85% of the education sector, supported by a comprehensive Education Management Information System (EMIS). There has been a strong policy direction from the Ministry of Education that all affected schools must be engaged in the recovery efforts in the first three years.

2. Strategic recovery vision

The recovery vision of Nepal's education sector is to ensure that all children, adolescents and youth, including those with disabilities, can access safe learning environments and that comprehensive school safety and disaster risk reduction is mainstreamed in the education sector through strengthened disaster management and resilience among communities. For this, the following objectives have been identified:

- a) Ensure the continuity of education during the recovery period by establishing semi-permanent child, adolescent and youth friendly education facilities, including gender-friendly sanitation facilities across all sub sectors of the education sector.

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- o Ensure sustained monitoring of the school attendance of boys and girls to facilitate corrective measures to reduce the number of children dropping out of school.
 - o Ensure that schools have gender-sensitive and child-friendly environments and develop links with appropriate services. The reconstruction and construction of adequate segregated toilets in all schools should be prioritised to provide access to hygienic and private sanitation facilities for adolescent girls.
- b) Ensure the recovery of education facilities in line with the three pillars of comprehensive school safety, across all sub-sectors.
- c) Ensure that all learning facilities, including institutional, private, religious, higher education, technical education and non-formal education, are disaster-resilient and provide safe learning spaces for children, adolescents and youth to receive a quality education. This entails safe site selection, the institutionalisation and strict implementation building codes, using disaster-resilient designs, the retrofitting of buildings and construction supervision and quality control.
- o Identify a minimum package for schools on comprehensive school safety and disaster risk reduction (CSS-DRR) to reach children, adolescents, teachers, head teachers, SMCs, parents, communities, education authorities and officials at all levels through existing government mechanisms.
 - o Ensure the equitable participation of women and men, girls and boys in planning and decision-making by community education committees.
- d) Strengthen the preparedness and risk reduction capacity of the education system from national to school level through the multi-hazard risk assessment and mapping for disaster management (structural and non-structural), action planning to reduce risks at the school level, the incorporation of school safety into school improvement plans (SIPs), planning for educational continuity, building response and preparedness capacities, and reaching out to communities.
- e) Mainstream risk reduction and resilience into formal and non-formal education by revising curricula and teachers' professional development.

3. Current status of ongoing recovery efforts

Immediate response—As projected by the Post Disaster Needs Assessment (PDNA) in July 2015, over 15,000 temporary learning centres (TLCs) were needed to ensure continued access to education within the school education sector. Several types of designs of TLCs were developed, adapted to local geographical contexts, and approved including temporary water and sanitation for health (WASH) facilities. Post-disaster teaching and learning materials were developed, including teacher guidelines on strengthening awareness and the provision of psycho-social support. To date about 6,500 TLCs have been established of which 3,561 were provided through the Nepal education cluster.

Reconstruction—A Programme Implementation Unit (PIU) the reconstruction of school buildings has been established at the Department of Education (DoE), with representation through district implementation units (DIUs) in the 14 most affected districts. The Department of Education carried out a rapid assessment of all basic and secondary schools in the 14 most affected districts and is currently undertaking a detailed damage and vulnerability assessment in the same districts. The data for 8 districts has been collected and analysed in time to inform this PDRF. An additional 120

schools in six districts¹ have been assessed and identified for repair and reconstruction. Under the PIU, the criteria have been finalised for the first phase of school reconstruction. The preparation of school reconstruction sub-projects is on-going, and of the estimated 1,510 schools confirmed to be supported for reconstruction under the PIU, the reconstruction of the first batch of 489 schools², which are in the most affected areas, has been published. Schools have been selected based on the extent of damage, geographical location, and the catchment area. Each selected school will be visited by district education office (DEO) engineers before work starts to ensure that details of the reconstruction process, e.g. a site plan, schedule and roles, are agreed and understood. ‘Kick-off meetings’ for school reconstruction will be held by DEOs and DIUs in each district to sign MoUs with SMCs and to explain schedules and modalities of reconstruction. In addition, 215 schools have been retrofitted and retro-maintained under Grant Assistance of Japanese Government 92 school blocks will be rehabilitated in three districts³ by June 2016.

Financial resources—The financing situation is as follows:

- The government has allocated NPR 150.25 million for the retro-maintenance of 601 schools, an additional NPR 14.1 million for maintenance in 141 schools and NPR 111.42 to retrofit 89 schools within the affected districts. NPR 15 million has been allocated to repair two district education offices⁴, as well as NPR 0.4 million to rehabilitate a lead resource centre⁵.
- For the reconstruction of schools, NPR 42.2 million has been allocated to build four-room blocks in 53 schools and NPR 3,382 million committed through 88 MoUs with humanitarian partners to establish semi-permanent learning spaces and build 3,867 classrooms in 652 schools.
- The DoE has allocated NPR 317.68 million to affected districts to remove debris and rubble and support schools to create suitable school environments.
- Within the technical education sector, the Swiss Development Cooperation (SDC) has committed NPR 1 billion for the recovery of Jiri technical colleges. Within the higher education sector, Tribhuvan University (TU) has generated NPR 60 million from internal resources for the recovery of its campuses.

Human resources — at the central level, two infrastructure engineers have been deployed within DoE to support detailed damage assessments and prepare guidelines and review designs. At the district level site officers have been deployed within the 14 most affected districts to support the coordination of the government’s district focal points. To ensure the capacity for the recovery, 184 engineers and 1,095 masons and contractors have been trained in 11 of the most affected districts⁶. Finally, 152,929 students and 5,732 teachers across affected and non-affected districts have been

¹ Dhading, Nuwakot, Gorkha, Lalitpur, Makwanpur, and Rasuwa

² Among the 489 schools, 42 are primary and lower secondary schools and 44 (higher) secondary schools with Japanese assistance and 5 schools in the Kathmandu Valley.

³ Dhading, Gorkha and Nuwakot

⁴ Rasuwa and Okhaldhunga

⁵ Gorkha;

⁶ These are the (14) most affected districts excluding the three Kathmandu Valley districts of Kathmandu, Lalitpur and Bhaktapur.

trained on disaster risk reduction (DRR) awareness. In addition, DRR instruction has been incorporated in the school sector curriculum and pre-service teacher professional development.

Designs for resilient schools—Standard seismic resilient school building designs are needed for the diverse contexts across the affected districts and for the different types of schools. These designs need to be in line with the ‘build back better’ principles in terms of earthquake resilience and be based on proven technical know-how. Key features should include child friendly facilities, WASH facilities, and where possible, sustainability features such as solar energy and rainwater harvesting. The guidelines for developing ‘type’ designs of school buildings have been completed. Retro-maintenance guidelines and designs for lower secondary, secondary and higher secondary schools, including some block designs, are under development. A supervision manual for technical supervisors and SMCs is also being drafted. The manual will have pictorial guidelines illustrating a step-by-step method of supervising different types of buildings. It will also depict guidelines for SMCs to support DIUs to supervise reconstruction work.

Procurement—An innovative procurement process will be implemented to speed up construction. To achieve this, construction procurement packages will be selected on a cluster basis by grouping nearby schools with similar geographical locations. During reconstruction, initiatives will be taken to promote the ownership of school reconstruction by SMCs. MoUs will be signed between DEOs and each SMC to clarify roles and responsibilities. SMCs will link the monitoring of construction work into their school improvement plans (SIPs).

Surveys and verification—In the absence of the detailed field level damage assessment of schools, the initial screening will rely on the 2015 rapid assessment across all schools in the 14 most affected districts. To initiate reconstruction, a detailed survey, site specific designs, estimation of costs and bills of quantities will be needed based on detailed site investigations. It is advisable to undertake the on-site verification of schools before the actual commencement of survey and design procedures. This preliminary screening will be helpful once the data from the detailed assessment becomes available for all of the 14 districts to the concerned development partners.

Higher and technical education—Although no education management information system (EMIS) exists for the higher education sector, all eight universities have updated assessments of their recovery needs and have provided these to the University Grants Commission (UGC). The Council of Technical and Vocational Education and Training has updated the recovery needs of the non-school-based technical education institutions.

Non-formal education—As the education sector PDNA also projected the social impacts, the Non-Formal Education Centre is currently estimating the recovery needs of NFE facilities and programmes, and projecting the expansion of NFE programmes needed to cater for children who do return to formal school education, and the additional disaster-related needs of youth and women enrolled in NFE programmes. The recovery needs of more than 400 private schools have been reported across 11 most-affected districts⁷, at a total value exceeding NPR 900 million.

⁷Bhaktapur, Dolakha, Gorkha, Kathmandu, Kavre, Lalitpur, Nuwakot, Dhading, Ramechhap, Rasuwa and Sindhupalchowk

Rubble and debris—Damaged and semi-destroyed school buildings have created large mounds of rubble and debris that impede accessibility to affected areas and restoration work. Unattended damaged school structures are a high risk to the lives of children and communities. This concern has been strongly raised by school management committee and communities. The size of damaged school structures varies, adding to the complexity of demolition and debris clearance. The safe demolition of these structures requires specialised expertise.

Private schools—Finally, as the Ministry of Education will support private schools by providing soft loans, the needs of the private sector have not been included in the estimated needs on the PDRF worksheets. This is also the case for the recovery needs for administration and governance buildings, as they will be reflected under public buildings in the PDRF.

4. Expected results: guiding principles

A holistic approach to the recovery of the school sector is the main principle, in line with the education sector recovery vision that all children and youth have access to quality and safe learning environments including resilient infrastructure, strong disaster-resilient management at the school level and ensuring the preparedness and disaster risk reduction awareness of communities, parents, school management, teachers and students. As part of this, the following principles have been identified to guide the recovery:

- *Minimum levels of quality and access*—Guarantee education as a right by safeguarding a minimum level of quality and access to education, including access to alternative, transitional and non-formal education and providing children, parents and teachers with the necessary psychosocial, physical, and emotional support to mitigate the earthquake damage.
- *Smooth transition*—Ensure a smooth transition between the emergency response, recovery needs and regular planning and implementation within the education sector. Ensure a needs-based response to allocate resources to ensure equal outcomes in line with Nepal’s 2022 vision.
- *Holistic recovery approach* — Implement and facilitate the recovery of education facilities through a holistic recovery approach, which goes beyond the physical infrastructure needs and includes the three pillars (safe schools, disaster risk management by at schools and community resilience) of the comprehensive framework for safe schools.
- *Inclusive and equity*—Design and implement inclusive and equity based interventions, ensuring that the context and availability of resources are taken into account when identifying and responding to disparities in education. This will include adopting needs-based prioritization and planning through targeted interventions, inclusive (gender, disabilities, marginalized groups) and responsive budgeting and the informed assessment of social impact and vulnerability.
- *Establish ‘complete’ schools*—Where applicable, establish ‘complete schools’ that of classrooms plus libraries, music facilities, laboratories, toilet facilities and multipurpose and administrative spaces as recommended in the *Guidelines for Developing Type Designs for School Buildings* with the concept of ‘build back better’. These schools can function as model hub schools to deliver quality education. Such initiatives are highly desirable to

deliver quality education. As long as adequate funding and technical support is available, this should be implemented in higher secondary schools in the 14 most earthquake-affected districts.

- *Educate on DRR*—Give education a central role in natural disaster management by teaching children, and through them their parents and communities, about risk reduction and disaster preparedness.
- *Collaboration and stakeholders participation*—Ensure collaboration and the participation of all stakeholders including the government, development partners, NGOs/CSOs, communities, and parents, through inclusive and broad consultation, communication and coordination under government leadership.
- *Sequencing*—Ensure the sequencing of recovery efforts through alignment with other sectors (such as community infrastructure reconstruction) and clear policy directions and guidelines for non-government contributions, and through decentralised implementation that conforms to quality assurance criteria and norms on the reconstruction of the education infrastructure.
- *Environmental safeguards*—Ensure environmental safeguards are maintained throughout the recovery period in terms of the sustainable use of natural and local resources, the recycling of materials from temporary and semi-permanent learning facilities and by the safe disposal of rubble and building waste to minimise potential ecological and health hazards.

5. Priority recovery programmes

5.1 Short-term recovery needs (less than one year)

The short-term recovery needs of the **school sub-sector** include the following:

- *Continuity of education services*—Based on the expected timeline for affected school sector facilities to complete the (re)construction of permanent infrastructures, the current temporary arrangements (temporary learning centers) will need to be upgraded to semi-permanent structures with teaching-learning and co-curricular and WASH facilities (including separate facilities for girls) to ensure continuous access to education in affected districts. Given that school reconstruction will take up to three years, these structures should be constructed or upgraded to withstand monsoon rains, storms, snow, hail and rain to ensure uninterrupted education in safe environments.
- *Debris removal and site clearance* at damaged schools is needed to prepare sites for setting up transitional classrooms and permanent buildings.

The short term needs of the **TVET and higher education sub-sectors** include the following:

- *Temporary spaces* are needed to resume classes and training programmes that were being delivered prior to the earthquakes. The individual institutions should be instructed and provided with the requisite resources by the UGC, the respective universities, and the Council of Technical Education and Vocational Training (CTEVT)

5.2 Medium term needs (1 to 2 years)

Medium term needs will be dominated by the reconstruction and retrofitting of school/college buildings, and allied structures (DEOs, resource centres, administrative buildings, libraries, laboratories, etc.). This will require reviewing and revising existing legal and oversight mechanisms for strengthening and ensuring safety in all types of educational facilities. In the school subsector, the medium term needs include:

- *Reconstruction*—The requirements are construction in line with approved designs and with technical oversight, the retro maintenance of damaged schools, the retrofitting of all schools (prioritising those in disaster-prone areas), ensuring schools are constructed in line with the comprehensive safe school model (as per the standards of the Hyogo Framework for Action), including the relocation of schools from unsafe locations and the provision of water and sanitation facilities with gender responsive designs.
 - o Ensure safe debris clearance and the demolition of damaged school buildings to enable reconstruction work, and identify and use landfills and manage debris in an environmental friendly way to minimise ecological and health hazards.
 - o Rebuild fully destroyed schools by following the ‘building back better’ principles with disaster-resilient technology and improved learning environments with additional features such as solar lighting, water harvesting structures and internet connectivity. Develop integrated school designs to replace the former fragmented, block wise approach to designing schools.
 - o Review and rationalise school locations (including school mergers), teacher deployment, unit costs, and incentive schemes to ensure that the limited resources are redirected to the most needed areas and communities.
 - o Relocate schools from unsafe locations. It is estimated that about 5% of the schools in the most affected districts need to be relocated. The provision should be made for adequate land in safe locations for such relocations.
 - o Carry out detailed building assessments after retrofitting or repairing damaged and partially destroyed schools.
 - o Identify the minimum acceptable requirements for comprehensive school safety and disaster risk reduction (CSS-DRR) in schools to reach children, teachers, head teachers, SMCs, parents, communities, education authorities and officials at all levels through existing government mechanisms.
- *Disaster risk management*—Carry out risk assessments and strengthen DRR responsive planning at district and school levels:
 - o Improve policies, guidelines and systems so that new school buildings meet higher standards and levels of safety than residential buildings. Review the existing school building guidelines to meet ‘immediate occupancy’ criteria. School buildings should function as evacuation shelters during disasters. It is important to establish effective independent quality control and inspection requirements and processes for the construction of school buildings. Policies, guidelines and building codes should be introduced to

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- o regulate safety standards for private schools through certification, technical and administrative support.
- o Institute additional skilled human resources and technical inputs (including third party monitoring) at the national, district and school levels to ensure compliance and quality assurance during all phases of building construction and rehabilitation.
- o Strengthen the EMIS to incorporate a module on school safety and DRR.
- *Resilient education*—Strengthen awareness on DRR among communities, school management, teachers, parents and students; and build a culture of safety via DRR in curricula and teaching through training and drills. Strengthen the capacity of affected people and institute responsive needs-based planning to reach out to children-at-risk and children who have dropped out of school due to the earthquakes, by strengthening school catchment area monitoring and school-based support schemes.
 - o Strengthen disaster preparedness and response at the school and community levels through school-based DRM and community based DRM training and planning by enhancing the capacity and preparedness of SMCs, PTAs, child clubs, communities, and others in disaster risk management. Develop school-wise emergency response plans to supplement the curriculum on disaster risk education and reduction to further raise students’and teachers’awareness of hazards such as earthquake, floods, landslides, and to guide responses and evacuations. MoE, DoE and DEOs need to prepare school continuity plans in case of disruptions to the school calendar caused by disasters.
 - o Include DRR and resilience in curricula and textbooks and train teachers on the new curricula and textbooks.

The medium term needs in the **technical education sector** include the following:

- *Reconstruction*—The reconstruction of TVET facilities and institutions using principles of ‘building back better’.
- *Training for technical and skilled workers*—As reconstruction will lead to high demand for technical and skilled workers such as masons, carpenters, bar benders and construction supervisors familiar with earthquake safety techniques, the government should use, and if necessary extend, its training programmes to help meet this additional demand. The CTEVT should also reorganise its schools to meet the current and anticipated demand for technical school leaving certificate (TSLC) and diploma level training and increase the number of training batches, which will require hiring additional trainers.
- *DRR*—Train instructors and facilitators on DRR and incorporate DRR in TVET programmes.

The medium term needs of the **higher education sub-sector** include the following:

- Rebuild damaged facilities and institutions by ‘building back better’. This includes build residential colleges.
- Extend courses on DRM and earthquake resistant engineering to all engineering colleges affiliated with universities.
- Establish a higher education EMIS to enhance its capacity to collect, analyse and disseminate information on all higher education institutions in the country.

- Offer subsidised credit and loans for earthquake-affected students to continue their education

5.3 Long-term needs (3 to 5 years and beyond)

The long-term recovery phase will include developing a nationwide policy and implementation plan for education safety across the country. Adequate policies and measures will be established for the multi-hazard preparedness of education institutions and for making buildings resilient to different kinds of disasters. In the long-term, all education institutions need to be built following ‘build back better’ principle and international best practices for school safety. Furthermore, it is necessary that all physical construction supports measures to increase the quality of education and enhance the learning environment.

The major long-term needs include the following:

- Carry out school area planning and risk assessments to identify schools that need relocating to safer locations. The replacement of seismically vulnerable school buildings and retrofitting requires information on risk levels building-by-building. These assessments should capture each school’s exposure to hazards such as floods, landslides, fires, wind-storms, avalanches, rock falls, the availability of drinking water and accessibility to catchment communities.
- Strengthen the capacity of higher education for carrying out research on DRR and DRM. Do this by establishing dedicated research centres in universities and by enhancing the capacity of existing centres within and outside universities. This is recommended by the proposed Higher Education Policy and needs to be linked to the provision of research grants for faculties to research related topics.
- Institutionalise mechanisms to ensure that all education institutions and facilities are disaster resilient. This includes restructuring or realignment units under MoE to ensure continued safety in the entire education sector, including private institutions affiliated to CTEVT or universities.
- Strengthen disaster preparedness and response at school and community levels through school-based DRM and community based DRM training and planning. Each school should develop an emergency response plan, supplemented by improvements in the curriculum on disaster risk education and reduction to raise students’and teachers’awareness on earthquake, floods, landslides and other hazards and to guide their responses and evacuation in the event of disasters. MoE, DoE and DEOs need to be ready to prepare education continuity plans in the event of disruptions to the school calendar by disasters.

5.4 Addressing the Social Impacts of Disasters

It is necessary to ensure that human recovery needs are also addressed. The implementation of the Consolidated Equity Strategy for schools (including the development and use of the equity index) is crucial for the targeting of resources to address post-disaster needs and the historical causes of disparate educational outcomes. It is also essential to adapt the following strategies to accommodate emerging needs:

- *Incentive* schemes —Scholarships present an opportunity to enhance access and retention in schools. The needs-based redirection of scholarship funding (in place of current ‘blanket’provisions) would meet the needs of the most vulnerable and disadvantaged children.

- *Health and nutrition programmes* —The government’s midday meals programme has shown significant success in increasing access and retention, especially among disadvantaged groups in highly food insecure areas. This scheme should be extended to the most earthquake-affected districts for a limited time to address the nutritional needs of school children. There is also a need to extend the Multi Sector Nutrition Strategy to affected areas, under which iron folic acid and deworming tablets are offered to students.
- *Advocacy and campaigns*—The ‘Welcome to School Campaign’ has been institutionalised as an annual reoccurring event to convince parents to enroll their children and ensure that children come to school from the start of the academic year. The government needs to continue the partnerships with national and local media that were established after the earthquakes to ensure that the campaign encourages children to return to school in affected areas, as well as to alert schools and communities in non-affected areas to cater to the additional needs of children who have migrated from affected areas.
- *Alternative education* —To address the needs of children who are drop out of formal education, the non-formal education and skill development programmes should be adapted to accommodate the likely large numbers of children who do not return to formal education. This will require the targeted expansion of school outreach programmes, flexible schooling programmes, and open schooling programmes in affected areas and areas of in-migration.
- *Gender equality and social inclusion* —The Government’s Gender Responsive Budgeting (GRB) principles will be applied in all recovery and reconstruction programmes in the sector.
- *Including children with disabilities*—The existing EMIS has only limited data on children with disabilities enrolled in school. Such children are amongst the most marginalised in terms of access, retention and learning outcomes. Further, the number of children with disabilities and severe injuries is likely to have increase after the earthquakes. It is therefore crucial to strengthen the collection of data on such children and introduce diagnostic and referral mechanisms in affected areas. Inclusion should be a core component of building back better to ensure that safe schools are accessible to children with disabilities.

5.5 Prioritisation

The recovery of administrative and governance facilities in the education sector will be given first priority as the expected timeline is relatively short and the recovery of these facilities is needed to facilitate school recovery, particularly in the 14 most-affected districts. Prioritisation will aim to provide equitable educational outcomes to disadvantaged and remote students and will be needs-based. Basic education is mandatory and access to basic and secondary education is a right in the current constitution. The resumption of education across all affected districts needs to be initiated as simultaneously as possible, with recovery within the first three years of the PDRF timeline. Within the higher education sector, community campuses under Tribhuvan University will be given the highest priority. Finally, within the non-formal education sector, priority will be given to the areas with large disparities and many pre-disaster identified at-risk school-aged children, aligned with the priorities provided within the basic education sub sector.

Within the school sector, the priority for recovery efforts will go to the 14 most affected districts. Within those, priority will be given to

- schools that need reconstruction and/or repair works due to damage caused by the April and May 2015 earthquakes⁸;
- higher secondary schools, secondary schools, lower secondary schools and PS2 primary schools⁹;
- school sites where one-bag concrete mixers can be delivered¹⁰;
- schools where student densities are relatively high;
- schools where there is no need for land acquisition, involuntary resettlement and/or there are no social risks;
- schools where no school buildings have been constructed by partners; and
- schools where no merger or consolidation has been/will be made with other schools after the earthquakes.

5. Implementation strategy and risk analysis

The reconstruction work within the education sector will be done through the PIU in the affected districts. In addition, the regular coordination of recovery efforts will be supported by the Nepal Education Cluster, which will ensure strong information management, partner coordination, and support the implementation of activities including the provision of safe school facilities, training, community engagement and DRR. The planning of recovery work will be coordinated through the sector wide approach (SWAp) of the School Sector Development Programme (SSDP) under MoE and progress and outcomes will be monitored through regular joint consultations and reviews as part of the SSDP SWAp. MoUs for establishing semi-permanent and permanent structures done during the response period at district level will be reviewed through a fast track mechanism to be accredited at central level by the DoE. A focal desk has been established at the DoE to coordinate off-budget support for reconstruction and the NEC has set up a coordination mechanism by placing focal persons in the most affected districts.

The current scope of the PIU's support for recovery efforts in the school education sector is to address the 14 most affected districts with the initial commitment by development partners to support 1,500 schools. Under the PIU, designs for DRR and resilient school structures have been approved and made accessible to non-state partners, which have currently committed support to semi-permanent and permanent reconstruction through 88 MoUs between the government and (I)NGOs, including those with the private sector, for building permanent and semi-permanent facilities. Apart from the NRA as PMU, key implementing agencies will be the PIU and DIUs. More engineers and sub-engineers will be needed in affected districts. Technical expertise is being recruited to support capacity development and the orientation of DoE engineers and stakeholders in safe school reconstruction practices.

1.1. Integration of cross cutting issues

- *Social protection*—Social support will be extended to children and teachers who have been disabled or developed additional needs as a result of the earthquakes by prioritising the

⁸ Schools that need damage assessments by the World Bank and/or retrofitting will be considered in the second and third batches.

⁹ Primary school with 60-120 students

¹⁰ Schools where a one-bag concrete mixer cannot be delivered will be considered in the second and third batches.

expansion of diagnostic and referral services in affected areas, by establishing special and inclusive education facilities and need-based support schemes including expanding school-based feeding schemes in primary schools (grades 1-5) in areas that have become food deficient as a result of the earthquakes.

- *Employment and livelihoods*—Support the rehabilitation and reconstruction of technical education facilities to strengthen economic development. This could focus on agricultural extension, business advisory services, and space for start-ups. Provide mobile skills training in the affected areas and on-the-job training on the basic skills required for rehabilitation and construction work, with priority given to women with children or caring for elderly people.
- *Disaster risk management*—Undertake nationwide comprehensive multi-hazard and environmental assessments and the retrofitting of schools, including strengthening the awareness and resilience of communities.
- *Gender and social inclusion* —Ensure the sustained monitoring of school attendance rates for boys and girls to identify any needed corrective measures to stem the incidence of children dropping out of school. The reconstruction of adequate and segregated school toilets should be prioritised to provide access to hygienic and private sanitation facilities for adolescent girls. Ensure the equitable participation of women and men in planning and decision-making on community education committees. Apply the Government’s Gender Responsive Budgeting (GRB) principles to all recovery and reconstruction programmes. Develop training and information materials based on the education level and knowledge of different socio-economic groups.

1.2. Outstanding issues for sector recovery

- a) A shortage of available safe land is delaying the relocation of schools.
- b) The pending approval of earthquake resilient school building designs and delays in commencing reconstruction work.
- c) Extensive rubble and unsafe damaged structures are restricting the construction of schools and threaten the safety of children and teachers.
- d) Implementing partners have raised the issue that MoU processes for the reconstruction of schools need simplifying through partnerships directly with SMCs, with the technical support of engineers or partnerships directly with private contractors and firms.
- e) Further strengthening of information management and district level coordination and planning is needed to avoid duplication and changes in the support provided to schools by donors.
- f) Clear directives for approval process to the district and department (DoE) level should be developed and shared with partners.
- g) Clear guidelines including, policies, strategies and roadmaps are needed to define the responsibilities of entities within the education sector, including development partners, and how they can contribute to and support the government and coordinate with each other.
- h) It is important to harmonise the identification and response to capacity building and training needs of school management committees, the PIU and engineers in developing policies and guidelines, safer demolition, landfill management and disaster resilient reconstruction through

regular coordination among stakeholders, by standardising training package development and by following-up and monitoring training and its implementation for effectiveness.

- i) The EMIS lacks data on safe schools, awareness of school safety, resource availability and allocation, coordination, collaboration and institutional capacity at different levels.

1.3. Key implementing partners

The Government of Nepal, Nepal education cluster, the PIU, the Asian Development Bank (ADB), Australia, the Department for International Development (DFID), the European Union, Finland, Japan International Corporation Agency (JICA), Norway, Swiss Agency for Development and Cooperation (SDC), UNESCO, UNICEF, UNDP, USAID, the World Food Programme (WFP), World Bank, Association of INGOs in Nepal (AIN), School Management Committees (SMCs), teachers and students.

1.4. Recommendations

- a) MoE and DoE should work closely with district education offices and engage with implementing partners (including I/NGOs) for their greater involvement in recovery and reconstruction. Implementing partners can support recovery and reconstruction work (software and hardware) with DEOs to rebuild school buildings through the participation of local people, including SMC and PTA members.
- b) Establish a robust information system, linked with the EMIS, and run a campaign to raise awareness among key stakeholders on the need to prioritise the allocation of resources for safe schools and DRR, and to strengthen coordination mechanisms to build systemic capacity.
- c) The Equity Index for Education in Emergencies should support the prioritisation of construction and resource allocation across three years in the school sector.
- d) The CLAs should have minimum consensus for school reconstruction and recovery work mainly through partnerships at the field level. Schools themselves need maximum local participation and ownership while building or rebuilding infrastructure. The role of communities, mainly via SMCs and PTAs, is crucial to ensure the quality of work, and oversee the use and minimise the misuse of construction funds. School reconstruction is envisioned to be done under agreements between DEOs, SMCs and I/NGOs to provide technical oversight and manage construction funds.
- e) Strengthen community engagement by building capacity on the ownership and participation in SIPs, by providing more autonomy in receiving funds from local bodies and by reducing local approval process times.
- f) Develop a transition strategy and action plan, including the winterisation and monsoon readiness of TLCs and clarify terminology of Temporary and Transitional learning spaces.

6. Financial requirements and planning

Of the identified recovery needs within the education sector, around 95% (NPR 106 billion) are within the school sector with the need to reconstruct and retro-maintenance over 8,000 schools.

Sector Plans and Financial Projections- Working Documents

Sixty-five per cent of this amount (NPR 69 billion) is projected for the 14 most affected districts. In line with the urgency to ensure early childhood education and development (ECED) and basic and secondary education as a right, recovery efforts within the school sector are planned for the first three years of the recovery period. This is in line with the health and community infrastructure timelines and where possible will be aligned with the deployment of institutional capacity and human resources, as well with the high presence of (I)NGOs and humanitarian partners. Within the higher education sector, around 90% of the recovery needs are within programmes that come under Tribhuvan University, which concurs with the percentage of students enrolled in higher education being catered to by this university. In the technical education sector, the highest need (NPR 730 million) has been identified in Dolakha (Jiri Technical Institute) although this need is being met with an equal commitment by SDC.

The total estimated cost of recovery needs in the education sector is NPR 180.6 billion. The components that have been identified as highest priority amount to NPR 136.7 billion of this amount. This is a substantial increase from the amount of NPR 39.8 billion identified under the PDNA. The main justification for these per sub-sector and the percentage of increase they justify are presented in Table 1:

Table 1: Increased education recovery activities in PDRF compared to PDNA by sub-sector Sectors and activities	Increase
School education sector	
Recovery needs extended from 14 districts under PDNA to 59 districts	71.34 %
Unit cost for reconstruction in line with build back better designs increased from Nrs. 1.5 million to Nrs. 1.91 million per classroom	
Number of classrooms to be reconstructed increased from 21,524 to 23,093	
Unit cost for repair and retro-maintenance in line with build back better designs increased from Nts. 0.45 million to Nrs. 0.91 million per classroom	
Number of classrooms to be repaired and retro-maintenanced increased from 7,563 to 28,616 across 59 districts	
The retrofitting schools in 31 other affected districts costing NPR 6,117 million included	
Unit cost for debris removal increased from Nrs. 0.68 million to Nrs. 0.89 million per school	
Higher secondary education	
The recovery need for collapsed higher education classrooms has increased from Nrs. 1.5 million to Nrs. 4.1 million for 1570 classrooms	
The recovery need for higher education damaged classrooms increased from Nrs. 0.45 million to Nrs. 2.1 million for 2,271 classrooms	
Higher education	
Tribhuvan University revised its recovery needs from Nrs. 3,162 million to Nrs. 9,982 million	77.96 %
Non-formal education	
Recovery needs extended from reconstruction/repair of 7/38 Community Learning Centers to the construction/repair of 38/53 CLCs	81.25 %

Sector Resource Requirement Summary Sheet

Budget	Five years budget (in million NPR)					Total budget for 5 years (NPR million)
	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	
Recovery and reconstruction budget needed	67,152	52,851	52,485	5,912	2,229	180,628
Committed budget (Government of Nepal)	5,913	5,913	5,913	0	0	17,739
Committed budget (development partners)	11,678	11,478	11,378	0	0	34,533
Funding gap	52,592	38,491	38,225	5,912	2,229	137,448

Education

TABLE: FINANCIAL REQUIREMENTS FOR PRIORITY RECOVERY PROGRAMME

	Year	2016	2017	2018	2019	2020	Total	On-budget sources	Off-budget sources	Unknown
Budget in Million NPR		67,151.8	52,850.6	52,484.5	5,912.1	2,229.1	180,628.1	48,831.1	3,441.3	128,355.7
Program										
Recovery of the school education sector		49,778.4	37,333.8	37,333.8			124,446.1	31,002.1	3,371.7	90,072.4
Recovery of the higher education sector		4,468.3	3,351.2	3,351.2			11,170.7		60.0	11,110.7
Recovery of the technical education sector		709.2	254.0	95.3			1,058.5	1,000.0		58.5
Recovery of the non-formal education sector		6.5	10.3	9.0			25.8			25.8
Expand engineering unit at the DOE and DEO levels to meet reconstruction needs		259.7					259.7			259.7
Integration of DRR in NFE programs		5.0					5.0			5.0
Strengthening DRM and DRR of CLCs, NFE facilitators and communities		15.0	15.0	15.0			45.0			45.0

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Strengthening NFE-MIS especially with regard to DRR at all levels	2.4	2.4	2.4			7.2			7.2
Monitor disparities in education at (sub) district level in the affected areas	1.1	1.1				2.1			2.1
Expansion of school/TLC based peer support programs	9.5	9.5	9.5	33.2	33.2	94.8			94.8
Social impact and vulnerability analysis for informing DRR strategies in SSDP	1.5					1.5			1.5
Establish DRM research centre	22.0					22.0			22.0
Livelihood support and Skill based training programme to affected community through CLCs	0.7	0.7	0.7	2.6	2.6	7.5			7.5
Retrofitting of school sector infrastructure	611.7	611.7	611.7	2,141.0	2,141.0	6,117.1			6,117.1
Recovery of NFE programs	14.9	14.9	14.9	52.3	52.3	149.5			149.5
Prioritized recovery of public libraries	205.0	205.0				410.0			410.0
Recovery of school education 28 least affected districts	11,031.9	11,031.9	11,031.9	3,677.3		36,772.9	16,829.0	9.7	19,934.2
Recovery of technical education sector	5.0	5.0	5.0	1.7		16.5			16.5
Recovery of public libraries	4.0	4.0	4.0	4.0		16.1			16.1

Sector Action Plan (SAP)

GOVERNMENT BUILDINGS



Post-Disaster Recovery Framework, 2073

May 2016

GOVERNMENT BUILDINGS

1. Situation analysis

The Post Disaster Recovery Framework (PDRF) builds on the Post Disaster Need Assessment (PDNA) findings and includes the analysis of data that has become available since the PDNA was published in 2015. The PDRF details the programmatic recovery and reconstruction needs within a period of 60 months (five years) 2016-2020.

As indicated in the PDNA report, 2688 government buildings were completely damaged and 3776 blocks were partially damaged by the 2015 earthquakes, including those of Village Development Committees (VDCs) and security agencies. The PDNA estimated NPR 15,413 million for repair and rebuilding of government buildings. Based on the analysis and detailed needs assessments, 767 government office buildings need to be either reconstructed, retrofitted or maintained - excluding buildings related to Security, Education, Health and Local Bodies.

2. Strategic vision for recovery

The strategic vision for recovery of the public building sector is to bring the government service delivery system back to pre-earthquake levels, integrating the concept of 'Build Back Better' in the design and construction of the physical facilities. The vision prioritises safety of public buildings, as well as durability, comfort and cost-effectiveness, through the utilisation of local construction materials and technology, as far as possible.

Objectives:

Recovery and reconstruction of Government buildings is grounded in the following key objectives:

- To construct safe, durable, comfortable and cost effective buildings.
- To promote local architecture, building construction technology related knowledge and skills and construction materials.
- To encourage the use of modern technology and new materials in the building construction.
- To develop effective financial instrument in the building sector by prioritising the importance of buildings
- To make special arrangement for the design, construction, use and maintenance of the government buildings.
- To improve in the institutional and legal structures of the building sector.

3. Current status of recovery efforts

1.1. Progress to date

- Under the Ministry of Urban Development, a Central Project Implementation Unit and 14 District Level Project Implementation Units in the 14 severely-affected districts have been established, covering Housing, Settlement Development, Public Buildings and Urban Infrastructure. 1346 Engineers have been appointed and mobilised in the concerned districts. Similarly, the selection of 650 Sub-engineers and 575 Assistance Sub-Engineers is currently in progress.
- Programmes for fiscal year 2016 have been approved by NRA, which has issued authority for expenditure.
- Contracts have been signed for construction of 167 Transitional Office Buildings in 6 districts and more are ready for issuance, covering IFB for 121 Transitional Office Buildings in 5 districts.
- Assessments have been made of the requirements for reconstruction for government buildings.
- The selection process for consultants to revise the National Building Code (NBC 105-Seismic Code) is underway.

3.2 Existing legal instruments and policies relating to buildings and construction

There are different legal and policy documents regulating building construction and maintenance, as outlined below:

Building Act, 2055

The Building Act of 2055BS covers all municipalities and village development committees nationwide. It has categorised all buildings into four structural types as per the building codes. A major thrust in this Act is the construction of safe buildings through application of the building codes. The Act outlines modalities for implementation and sanctions for non-compliance.

Building Regulation, 2066

This outlines rates for acquiring building permits and specifies that municipalities are required to issue permits within 30 days of application, as long as the application meets all stipulated requirements. The national building code specifies technical requirements and approvals required by an engineer or architect.

National Building Codes:

National Building Codes were only systematised after the devastation resulting from the earthquake of 2045BS. The Codes are divided into four categories: State of Art Design; Professionally Engineered Buildings; Mandatory Guidelines and Guidelines for Remote Rural Buildings. The NBC covers architectural and structural design requirements, construction materials, planning aspects, and building safety requirements.

Bye-laws related to building construction:

Besides the National Building Codes, most municipalities have their own building byelaws in practice. As per the powers given by the Local Self Governance Act and Regulation, local authorities can implement building bye-laws which are approved by the town development committees and that fall within the provisions of the Town Development Act. In the case of Kathmandu Valley, supplementary changes in byelaws have been made to accommodate the constantly changing urban character of the Valley.

Guidelines for building repair and maintenance:

For the repair and maintenance of the buildings, the Department of Urban Development and Building Construction formulated Building Repair and Maintenance Guidelines in 2062. The Guidelines provide information about the major characteristics of buildings, together with repair and maintenance methods. However, the Guidelines do not so far include information on sustainable construction materials and innovative methods available in the market. The guidelines need to be updated to provide a range of new information, including on maintenance of underground floors, repair and maintenance of internal and external finishing works and other issues related to repair and maintenance.

Guidelines for Green Building Technology:

The Department of Urban Development and Building Construction has formulated Guidelines for Green Building Technology, to advocate for the concept of sustainable development. The major objective of these guidelines is to promote construction of energy-efficient and environmentally-friendly buildings. Guidelines cover a range of matters, including location, construction site, appropriate size of doors and windows for adequate light, tapping solar energy, efficient use of air conditioners and other energy-consuming equipment, and rainwater harvesting.

Recovery Principles and Guidelines:

These provide guiding principles and approaches for disaster recovery, based on experience and lessons learnt during recovery operations. The guidelines also outline contingency planning for municipalities to ensure more resilient arrangements, as well as specifying clear institutional roles and responsibilities for recovery and preparedness. The document describes the key principles, approaches and strategies of disaster recovery planning in Nepal, including recovery preparedness at district and municipality levels.

Retrofit Guidelines:

Seismic retrofit guidelines were drafted with UNDP support in 2013. The guidelines include retrofitting design techniques for three typologies of the buildings: RCC-framed structures, load bearing structures, and adobe structures. While still in the draft stage, the Guidelines provide a ready reference for retrofitting buildings.

Guidelines for the Use of Colour in Public Buildings, 2012:

These Guidelines have been issued to provide standards for maintenance of consistency and uniqueness of public buildings.

Space Standards for Government Building:

The standards cover the allocation of office space to various central and district level offices including the offices of Ministers, but do not cover special purpose offices.

Draft National Action Plan Action (NAPA) for Safer Building Construction (SBC):

The overall objective of the National Action Plan for Safer Building Construction is to provide a common conceptual and strategic framework that guides all stakeholders on necessary steps for contributing to safer urban/semi-urban building construction.

4. Expected sector results and indicators relative to the reconstruction policy on government buildings

The following working policy and plans have been proposed to achieve targets, objectives and quality in the construction of public buildings:

- To make buildings safe, comfortable and cost effective, various codes, guidelines and standards will be followed.
- Fixed shape, facade and structures for specific departments and offices will be followed in the design of fully government-owned and semi-government owned corporation buildings.
- Appropriate new building construction materials will be used to ensure cost effectiveness, energy efficiency and environment-friendliness.
- To build back better, all buildings will be equipped with solar energy systems, while natural lighting and ventilation will be utilised to ensure energy efficiency.
- To make buildings safe and cost effective, light construction materials will be used for internal partitions.
- Multi-storey integrated office buildings will be constructed to ensure optimum use of available land.
- All buildings will be accessible at least up to ground floor level for physically-disabled people.
- Use of locally available construction materials will be promoted, together with the use of improved technology.
- At least one toilet unit will be allocated for disabled people.
- Consistency in the use of colour in the exterior facade and interiors of the public buildings will be maintained.
- Consistency regarding the facilities such as furniture and equipment, toilets, air conditioning, light and ventilation facilities, lamps, shape and size of the rooms will be maintained. This will be in accordance with the responsibilities of the post, status or level of civil servants.
- Water supply, electricity, machinery, and equipment will be provided in an integrated manner. The design and formulation of plans and programmes will take into consideration the services and facilities to be made available in the buildings.
- Only trained masons will be employed to undertake the construction work.
- The National Building Code, especially Seismic Code (NBC 105) will be revised.

5. Implementation Strategy and Coordination Arrangements

As articulated in National Reconstruction Policy, 2072, a Central Level Project Implementation Unit (CL-PIU) headed by Gazetted First Class Officer and 14 District-level Project Implementation

Sector Plans and Financial Projections- Working Documents

Units headed by Gazetted Second Class Officers have been established for coordination, facilitation and implementation of rural housing, settlement development, public building construction and development of urban infrastructure. Similarly, in the remaining 17 districts, the division chief of DUDBC will be responsible for implementation of this projects covering government buildings.

The following critical issues have been identified during the recovery process:

- Due to unavailability of land, integrated interdepartmental government buildings are necessary, but construction of these encounters reluctance on the part of line departments.
- There is a lack of maintenance/retrofitting, design standards and guidelines.
- Capacity building of technicians and masons is required.
- Availability of quality construction materials must be assured.
- Capacities of contractors and timely completion of the project have proved problematic. Most of the projects implemented by DUDBC have not been completed on time, with resulting cost implications.

Key implementing partners

ADB: Government facilities construction/rehabilitation (US\$ 37.04 Million)

The World Bank: Disaster Risk Management System and Project Implementation Support (US\$ 15 Million).

6. Financial requirements and planning

The Post Disaster Needs Assessment (PDNA) projected NRs. 15,413 million for this sector, including VDC buildings and Security. An updated review of current needs and demands points to a greater need than initially estimated, namely NRs. 27,688 Million will be required for public buildings. The cost is calculated on the basis of space requirements and prevailing plinth area. The calculated cost may vary by $\pm 15\%$.

FINANCIAL REQUIREMENTS BY CATEGORY
Millions NPR

S. No.	Description/Categories	Amount
1	Central Level Government Building Construction	8,295.0
2	District Level Government Building Construction*	5,966.4
3	Government Building Maintenance/Retrofitting*	2,310.4
4	Jail	680.0
5	Transitional Buildings	507.0
6	Consulting Service	141.4
7	Government Residential Buildings	600.0
8	Service Center Government Building Construction	3,410.0
9	Training Buildings	750.0
10	Logistic Support (Furniture/Equipment/Vehicles) including certification of individual housing, urban infrastructure	304.2
11	Incremental Expenses, including certification of individual housing, and urban infrastructure	6,813.5
Total		29,777.9

Note: Lines 2 and 3 includes construction, reconstruction and maintenance of government buildings under Ministry of Information and Communication.

Total Committed budget

Budget in NRs. 000

S.no	Source/Project	Amount	Remarks
1	IDA / EHRP- Disaster Risk Management System (US \$ 10 Million)	1050000	
2	IDA / EHRP- Project Implementation Support (US\$ 5 Million)	525000	
3	ADB- Government Facilities Construction/Rehabilitation (US\$ 37.04 Million)	3491994	
Total		5066994	

Government Buildings

TABLE: FINANCIAL REQUIREMENTS FOR PRIORITY RECOVERY PROGRAMME

	Year	2016	2017	2018	2019	2020	Total	On-budget sources	Off-budget sources	Unknown
	Budget in Million NPR	7,342	8,793	6,610	3,959	1,735	29,778	4,828	0	24,950
Program										
Central Level Government Building Construction		2,074	3,318	2,074	830		8,295			8,295
District Level Government Building Construction		1,762	2,579	1,162	465		5,967	2,610		3,357
Government Building Maintenance/Retrofitting		1,155	1,155				2,311	139		2,172
Jail		170	272	170	68		680	480		200
Transitional Buildings		254	254				507	507		
Consulting Service		42	57	42			141	121		20
Government Residential Buildings			150	300	150		600			600
Service Center Government Building Construction				1,364	1,023	1,023	3,410			3,410
Training Buildings		375	300	75			750	750		
Logistic Support (Furniture/Equipment/Vehicles) including certification of individual housing, urban infrastructure		76	76	61	61	30	304	81		223
Incremental Expenses) (B) including certification of individual housing, urban infrastructure		2,044	1,363	1,363	1,363	681	6,814	139		6,674

Sector Action Plan (SAP)

Health

Post-Disaster Recovery Framework, 2073

May 2016



HEALTH

Situation Analysis

In 2015 Nepal faced a year of humanitarian crisis. On 25 April a powerful earthquake of magnitude 7.8 struck Nepal, followed by more than 300 aftershocks greater than magnitude 4.0, including one of magnitude 7.3 on 12 May 2015. According to the Ministry of Home Affairs, 8,898 people lost their lives and 22,303 were injured. Out of the 75 districts in the country, 31 were affected and 14 among these were considered to be highly affected. The impact of the earthquake on the health sector was devastating, causing significant damages and losses to health infrastructure leading to complete disruption of healthcare service delivery. In 18 earthquake-affected districts, out of 1,080 health facilities, 113 were completely damaged and 216 were partially damaged by the earthquakes, causing an interruption in the delivery of health services. This translates to 43% of the country's health institutions being directly affected by the earthquake. In monetary terms, the damages and losses are estimated at NPR 7.54 billion, which necessitates NPR 14.7 billion (estimated) for recovery and reconstruction needs.

Section 2. Strategic Recovery Vision for the sector

“Protect lives and achieve highest level of health care through establishment of equitable and disaster resilient health system.”

Section 3. Current status of ongoing recovery efforts in the sector

The immediate priority of the Ministry of Health and District Health Offices after the earthquake was to save lives by providing treatment to the injured and also to restore disrupted health services to address the demands of an increased patient flow in the affected areas. In the aftermath of the earthquake, a Health Emergency Operation Center (HEOC) was activated and an incident command system for overall response coordination was set up under the lead of the Health Minister. The Ministry of Health and partners jointly conducted cluster coordination meetings and four sub-thematic groups were formed: i) reproductive health (RH), ii) mental health and psychosocial issues, iii) injuries, rehabilitation and disability and iv) tuberculosis (TB).

As an immediate response in the earthquake-affected districts, the Ministry of Health and partners provided assistance for provision of free treatment and referral services; continuation of services through temporary structures; procurement and distribution of drugs, supplies and relief items; and mobilisation of national and international medical treatment teams; mobilisation of rapid response team and behaviour change communication.

With the funding support of different partners, more than 40 prefabricated and shelter type health facilities have already been reconstructed in 7 affected districts.

Section 4. Expected sector results and indicators

- % of damaged health facilities rebuilt with temporary/semi-permanent structures
- % of damaged health facilities rebuilt with permanent structures
- Number of partially damaged health facilities repaired
- % of health facilities with no stock out of key health commodities
- Number of districts with functional electronic recording and reporting system
- Number of districts with revised contingency plan
- % of children fully immunised
- % of institutional delivery
- % of health facilities providing newborn care services as per standard
- % of health facilities providing mental health and psychosocial counselling

Section 5. Priority Recovery programmes

The post disaster health recovery programme activities are needs-based and demand-driven where the following baseline criteria were considered:

- Recommendations of Post Disaster Need Assessment (PDNA). I.e. short term and medium term to longer term;
- Special focus to 14 earthquake most-affected and extended priority districts;
- Special focus to the children under the age of five years, pregnant and lactating women in hard to reach areas;
- Outcomes of districts and national review meetings of earthquake health response
- Prioritised and relevant interventions mentioned in Nepal Health Sector Strategy 2016-2020
- High emphasis on health system strengthening to deliver comprehensive health services

Listed below are the priority programmes for Health:

i) Reconstruction, repair and maintenance of temporary and permanent health infrastructure

The Ministry of Health has given priority to the reconstruction, repair and maintenance of partially and fully-damaged health facilities in the earthquake-affected districts. To inform the reconstruction planning process, the Government conducted detailed engineering assessments to provide the technical details required to design and cost the reconstruction and rehabilitation plan. Prior to this, the Department of Health Services (DoHS) had developed an information system to manage health infrastructure in Nepal. The system is designed to collect, update and present infrastructure information (location, accessibility, land and building details) about every health facility. This system uses a geographic information system (GIS) and data collected by mobile phones from health facilities on location (GPS coordinates) and road accessibility. This information has been used to prepare the reconstruction plan.

Trained technical experts visited 784 facilities to gather information using standardised damage assessment guidelines and tools. In addition to assessing damage to health facility buildings, the accessibility, availability of lifelines (including water, electricity and sewerage), land ownership, and medical equipment status were also considered to inform future health facility reconstruction planning.

A major problem foreseen for reconstruction was the lack of land owned by facilities. The updated data from the assessment showed that many of the facilities had already acquired land, or at least were in possession of usage rights for public land. This information was used to prioritise building and for assigning the reconstruction of facilities to different organisations: facilities with confirmed land ownership were given highest priority, followed by facilities with usage rights on public land.

Disaster Resilient building

The design and implementation of the reconstruction work should be in line with the disaster resilience principles. At the Third UN World Conference on Disaster Risk Reduction in Sendai, Japan, WHO released the Comprehensive Safe Hospital Framework that will guide the development and implementation of safe hospital programmes at national, subnational and facility levels. It is a guiding document developed for making hospitals safe from disasters. WHO has also launched the Hospital Safety Index (second edition), which is an assessment tool for giving a snapshot of the safety and preparedness of hospitals to remain operational in emergencies and disasters.

The building must be resilient to hazards such as earthquake, fire, flood and lightning. Land selection decisions may play an important role in reducing damage from landslides and floods. Prevailing codes must be followed to mitigate the risk of such hazards. In addition, safety considerations should be adopted to reduce injury from non-structural building elements such as partition walls, furniture and fixture installations.

a) Committed reconstruction projects for the intermediate term

The number and type of health facilities (HFs) that will be reconstructed by 2016 are indicated in table below.

Type of structure	Number of HFs to be constructed
Prefabricated structures	248
Semi-permanent structures	36
Shelter	12
Repair/maintenance	39
Permanent structures	13

More than 50 partners, including bilateral partners, donors, UN, INGOs, NGOs, private agencies and professional bodies, have committed resources for the reconstruction of health infrastructure. The total commitment is NPR 4.4 billion.

b) Reconstruction projects proposed for the medium term

The number and type of health facilities that are planned to be constructed over the course of five years during the PDRF are listed in Table below.

Type of structure	Number of HFs to be constructed	Unit cost, approx. (NPR million)
Prefabricated structures	256	
• Type I (covering > 5,000 population)		6
• Type II (covering ≤ 5,000 population)		4
Permanent structures	888	
• Primary Health Care Centre		36
• 15-bed hospital		60
• 30-bed hospital		90
Repair/maintenance of buildings	643	0.3

ii) Procurement and distribution of equipment, drugs and other non-medical supplies

The Ministry of Health will give the highest priority to procurement and distribution of equipment, drugs and other key supplies required for the effective functioning of the health services in the earthquake-affected districts. Special priority will be given to newly constructed temporary, prefabricated and permanent structures. This will also include furnishing health facilities and hospital wards. The Ministry will focus on supplying disaster resilient cold chain equipment in the affected districts.

iii) Strengthening the Health Information System

Timely, accurate information plays a critical role in protecting the health and wellbeing of all, including people with disabilities, children and the elderly. In the spirit of ‘building back better’, the Ministry finds it instrumental to start electronic reporting of health service data from facilities in the earthquake-affected districts. This will drastically reduce errors and difficulties faced in a paper based reporting system and ensure quality data for evidence based decision-making at all levels. Key activities include:

- Electronic reporting from health facilities (PHCCs and health posts) in affected districts
- Electronic health record system in hospitals in affected districts

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- Establishment and operationalisation of data bank with adequate server capacity at the central level
- Re-engineering Human Resource Information System (HuRIS), aligning it with the personal information system (PIS) at the central level
- Develop and implement interoperability framework and standards to ensure functional health information exchange at all levels
- Strengthen and standardise management information systems within five councils to establish a minimum data set for the health workforce at the Ministry of Health

iv) Health Sector emergency preparedness, response and disaster risk reduction (DRR) planning

Health is one of the foremost areas of concern in disaster risk reduction (DRR), as disasters tend to damage or destroy the structural, non-structural and functional components of health infrastructure. These effects have direct impact on the population (e.g., injury, death and disability), and cause disruptions in basic social services, including access to health facilities and providers. Quite often, the poor and vulnerable groups such as children, pregnant women and lactating mothers are disproportionately affected by disaster impact. The key lesson learned from the health sector response to the Nepal earthquake 2015 is that the sector must be better prepared for any mass casualty incidents. Activation of the HEOC for response coordination, activation of the incident command system (ICS), immediate deployment of health personnel in various thematic areas, to affected districts and hub hospitals are the key areas needed to strengthen preparedness.

Achieving disaster and climate resilience in the health and nutrition sector requires a multi-sectoral approach and integrated coordination. As health and nutrition outcomes are linked with other social development targets in areas such as water and sanitation, local governance, gender, social inclusion, the outcomes must be prioritised in all phases of risk assessment and planning. The risk assessment is an integral part of recovery, and its continuity can be ensured through better sharing of risk information at district and village levels, allocation of budget for DRR and health in the respective local development plans, building the capacity of district and frontline health workers as first responders and in communicating risk messages. Children and adolescents as well as mothers can also be empowered as change agents in their community in an effort to restore confidence in the services provided by the health system. Some of the activities are:

- Increase awareness and capacity of health service providers and community members to assess risks, plan for and manage consequences and service delivery demands
- Review and update health sector contingency plans developed to address any mass casualty incidents in the affected districts
- Support the development of mass casualty management (MCM) at the hub hospitals for providing immediate response in close coordination with public/private health facilities, triage, referral system, first aid, information recording/reporting, orientation on protocols and hub hospital concept to all hubs (25 hub hospitals throughout the country)
- Support development and update of district health sector contingency plans, including minimal initial service package (MISP) for SRH
- Implement simulation exercise to test contingency and MCM plans at District Health Office and hospital

- Provide rapid response team training
- Provide orientation on disease surveillance including Early Warning And Reporting System (EWARS)
- Work with national and local authorities to ensure proper land use of health facilities that need to be relocated, including a resilient cold chain system
- Update disaster risk information with age and gender disaggregated data in recovery and local development planning
- Develop child-friendly and age-appropriate behavioural change messages on DRR, nutrition and health in vulnerable and disaster-affected communities
- Advocate for allocation of funds for DRR in annual district health budgets

v) *Provision of quality newborn, child, maternal, sexual and reproductive Health Services*

In any disaster setting, the poor and vulnerable groups such as children, adolescents, pregnant women and lactating mothers are disproportionately affected. There is a need to prioritise and respond to the special needs of these groups in disaster settings. As a priority 1 programme, the Ministry will place extra resources to strengthen and re-establish functional maternal, neonatal and child health (MNCH) and reproductive health services in the affected districts. The Ministry will prioritise the following activities during the recovery phase:

- Construction of maternity waiting homes/health huts and strengthening of health facilities as “Comprehensive Centre of Excellence.”
- Provision of disaster resilient cold chain equipment in the affected districts.
- Strengthen the provision of newborn care services at all levels.
- Ensure availability of Comprehensive Emergency Obstetric and Newborn Care (CEmONC) in all the district hospitals.
- Conduct comprehensive family planning and medical camps focusing on permanent and long-acting reversible contraceptives (LARC) to increase access to contraceptives in the most vulnerable communities.
- Initiate services on clinical management of rape (CMR) at least in the district hospitals.
- Prioritise capacity building of health workers posted in the affected districts on, among others, sexual and reproductive health (SRH) and adolescent sexual and reproductive health (ASRH) in emergencies, CMR, sexually transmitted infection, implant/intra uterine contraceptive device (IUCD), and skilled birth attendant (SBA).
- Rehabilitate Anti-retroviral Therapy Centres and Prevention of maternal to child transmission (PMTCT) service sites.

vi) *Mental health, clinical management of rape and psychosocial counselling support*

The earthquake not only caused death, it also had a psychosocial effect on survivors. The most commonly mentioned psychosocial problems include anxiety and persistent fears –more particularly fear of experiencing more earthquakes and fear of dying. So far, the Ministry of Health together with partners and NGOs has provided short-term psychosocial interventions for the general population as well as more focused health system responses to address psychosocial and mental health needs of earthquake-affected populations. These programmes include psychosocial first aid, community orientations and awareness raising sessions, psychosocial counselling services, discussion programme on radio and TV, counselling hotline, training of community leaders, school based programmes on conversion disorder and integration of mental health into primary health care.

In the longer term, there is a need to sustain many of these initiatives and also increase the coverage in order to reach a larger population for better psychosocial and mental health support. Some of the activities that have been planned are:

- Training and mobilisation of the Female Community Health Volunteers (FCHVs) for psychosocial counselling
- Training of medical officers on psychotropic medication
- Provision of regular supply of psychotropic drugs listed in the free drug list
- Awareness on psychosocial and mental health
- Regular mentoring and coaching of trained health workers
- Establishment of a mental health unit under the Ministry of Health
- Train psychosocial counsellors locally in the 14 most affected districts

vii) *Special Campaign for immunisation*

Immunisation for children, adolescent and women is important to protect lives from different infectious and non-infectious diseases particularly in populations living in crowded and unplanned settings. Ministry of Health with support from WHO and UNICEF will prioritise and conduct Sub National Immunisation Days (SNIDs) and other campaigns in affected districts.

viii) *Outbreak response and disease surveillance*

Outbreak of communicable disease is common in post-disaster settings where people have compromised lifestyles. People who are living under tents are highly vulnerable to water and vector borne diseases. Disease surveillance and early warning system is hence very crucial. The MoH will also give high priority to making institutional arrangements to provide rapid response in the case of outbreak of any communicable disease in the affected districts. Prioritised activities include:

- Establish/strengthen disease surveillance system
- Provide outbreak response
- Provide insecticide treated bed nets and other essential drugs and supplies as required
- Hygiene promotion interventions and water, sanitation and health education

ix) *Behaviour change communication and community mobilisation*

Health information and communication is crucial for effective recovery. Various communication channels need to be mobilised to promote dialogue with the affected populations and to build resilience. In order to ensure the accountability to affected populations, there is a need to provide platforms for affected people to voice their concerns, provide feedback on the response to duty

bearers and also receive information to help deal with the situation. During the recovery phase, the MoH will:

- Mobilise FCHVs, peer groups/educators and students to discuss and disseminate various health related information
- Partner with mass media for accurate reporting
- Strengthen Health Facility Management Operation and Management Committee (HFOMC)
- Implement awareness raising interventions to promote knowledge on the importance of seeking health care immediately after rape, support community mobilisation to increase utilisation of ASRH services, and raise awareness on danger signs during pregnancy, labour and the postpartum period and among neonates.

x) Monitoring, supervision and Evaluation of post-disaster recovery activities

Monitoring and evaluation in the recovery phase is crucial. The Ministry of Health will accord high priority in developing an effective monitoring and evaluation mechanism to monitor progress as well as evaluate impact in the effected districts. According to the detailed engineering assessment, almost 50 per cent of the total 784 health facilities in the affected areas were completely damaged, another 35 per cent were partially damaged. Very few HFs were not damaged. There is available baseline information for the damage of infrastructure. However, MOH will use information from health management information system (HMIS) and/or the 2015 PDNA report as baseline to monitor progress. After the Government appeal for reconstruction, the MoH has signed MoUs with more than 50 national and international organisations for reconstruction of HFs and revitalisation of the health care programme to resume regular health services.

The Ministry has developed different sets of indicators for different partners based on the agreement between the MoH and implementing partners. Partners submit progress reports with these specific indicators, in addition there is a separate monitoring plan of ongoing activities. The monitoring and evaluation can help determine whether district facilities are ready to respond or not based on the implementation of safe hospital initiatives at each facility. A number of hospitals and districts have developed and tested their health contingency plan, and a number of training programmes have been organised to strengthen RRT in the districts as well as stocks/resources allocated for disaster response.

Section 6. Implementation strategy and risk analysis

Recovery and reconstruction of the sector will be guided by a Central Coordination Committee for Recovery and Reconstruction, led by the Ministry of Health and will include development partners. Based on the finalized implementation plans, budgets will be allocated to districts on the basis of identified needs and resource availability. While major infrastructure and equipment, routine drugs and supplies as well as major human resources will be provided by the central government, the remaining activities will be undertaken by the concerned districts, based on guidelines to be developed by the Ministry of Health.

Considering the urgency and immediate need for resuming services in permanent structures through immediate initiation of reconstruction and rehabilitation of damaged health facilities, the MoH has envisaged to adopt the organization model of projects, in which a project coordination office (PCO) will be established at the central level and project implementation units (PIUs) will be established at the district level.

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The project coordination office will be the central coordination office under the PPICD of the MoH. This office will have the authority and responsibility for overall coordination of reconstruction including administration, budgeting, planning and financial control, construction technology and design control, procurement control, monitoring and evaluation, inter- and intra-organization coordination, setting design standards and guidelines, information and knowledge management, public relation management, procurement control and monitoring, and evaluation and reporting. The PCO will be comprised of a team of experts, including a public health administrator, a medical officer, a public health officer, civil engineers (with structural engineering background), an electrical engineer, a contract management expert, a civil overseer, a data management expert and account officers.

The project implementation unit will be established at district level under the respective District Health Office/District Public Health Office. There will be PIUs in all 14 most- affected districts. If needed, the PCO may form a separate PIU office for conducting reconstruction activities in additional districts. The PIU office will have the authority and responsibility for managing all the tasks of implementation of the approved project activities, which includes site reconnaissance and site-specific needs assessment, preparation of the site specific estimates, procurement, contract administration, site supervision, reporting and project handover. The PIU will consist of the project coordinator, a civil engineer, an electrical overseer and others.

Partners:

In response to the appeal from the Government to support the reconstruction and recovery of the health system, various donors and partners have come forward to offer support. This includes more than 50 partners, and bilateral agencies, UN agencies, INGOs, NGOs, private agencies and professional bodies have committed resources. Some of the major partners include WHO, UNICEF, UNFPA, GIZ, KOICA, JICA, KfW - Kreditanstalt für Wiederaufbau, USAID, DFID, Americares, MdM Spain (Médicos del Mundo) Spain, MDM France (Médecins du Monde) France, ANMF - American Nepal Medical Foundation, IMC-International Medical Corps, World Vision, Save the Children, CARE Nepal, Plan International and Nepal Red Cross Society.

Key issues/challenges

Some of the key issues and challenges that has affected the smooth implementation of the response and recovery activities in current fiscal year and that may have lasting affect during the implementation of the PDRF are listed below:

- Political instability has delayed implementation of recovery activities including reconstruction and repair/maintenance work
- DUDBC, mainly responsible reconstruction, don't have enough capacity to lead the construction work within specific time frame.
- Slow or delayed reconstruction of temporary and permanent health infrastructure has affected the quality of health service delivery
- Limited or weak coordination among different partners at the district level has resulted in duplication of activities
- There is no funding commitment for the priority programme for the period 2017–2021. This may delay implementation of activities

Recommendations

- Considering that it is difficult and undesirable to provide health services from tents for a longer period of time, the MoH needs to continue the construction of semi-permanent structures for the provision of basic health services
- The MoH should prioritize the construction of earthquake resilient infrastructure including hospitals and health facilities. The construction work has to be implemented mainly through the PIU model, the Ministry has previous experience with this approach
- Considering that there is a strong focus among the MoH and partners on the reconstruction of temporary and permanent infrastructure, the Ministry needs to increase its attention to effective service delivery, mainly targeting hard to reach and marginalized communities
- Increased priority should be accorded to demand generation and awareness raising interventions including mobilization of the FCHVs and youth
- The health sector requires multi-sector support and assistance in order to have a stronger impact

Section 7. Financial requirements and planning (as per the attached template)

In reference to PDNA report, total estimated budget for reconstruction and recovery was estimated at 14.7 billion rupees. That is divided into central and district level.

However, as per the PDRF, the total estimated recovery budgetary need is NPR. 17.5 billion. The percentage allocation in successive years, starting from the next FY 2016-17 is 20 percent, 30 percent, 25 percent, 15 percent and 10 percent respectively. The increase in the budget is justified as below:

- PDRF has been developed on the basis of the findings from a detail engineering assessment of damaged health facilities in most affected districts. According to the principle of “build back better”, the budget is calculated for completely and partially damaged structures in 31 affected districts.
- The PDRF has estimated the budget required for recovery and reconstruction for five years as compared to the PDNA, which was estimated for three years.

Projected financial disbursements by year

Budget	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	Total Budget for Five Years (in Millions NRs)
Recovery and Reconstruction Budget Needed	6228.6	5247.9	4373.25	2623.95	1749.3	20223
Committed Budget (Government of Nepal)	3498.6	5247.9	4373.25	2623.95	1749.3	17493

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Committed (Development KOICA, JICA, USAID)	Budget Partners KfW and	2730	0	0	0	0	2730
Funding Gap		3498.6	5247.9	4373.25	2623.95	1749.3	17493

Different partners, bilateral agencies, INGOs, UN agencies, private agencies have shown commitment to provide support in the construction of temporary and semi-permanent structures in FY 2015/16. For the PDRF period of 2017-2021, 4 bilateral agreement have already been made to reconstruct major hospitals at the central and district levels. The remaining budget estimated for the framework is currently planned under the Ministry of Health to be discussed with the partners/donors further.

Health

TABLE: FINANCIAL REQUIREMENTS FOR PRIORITY RECOVERY PROGRAMME

	Year	2016	2017	2018	2019	2020	Total
	Budget in Million NPR	2,084	4,088	4,865	4,033	2,423	17,493
Program							
Program 1: Reconstruction, Repair and Maintenance of temporary and permanent health infrastructure in 31 Earthquake Affected Districts							
Reconstruction of Temporary Structure of Damaged Health Facilities							
Temporary Structure Reconstruction of Health Facilities (6 HFs)		24.0					24
Temporary Structure Reconstruction of Health Facilities (0)		0.0					0
Temporary Structure Reconstruction of Health Facilities (23 HFs)		92.0					92
Temporary Structure Reconstruction of Health Facilities (2HFs)		8.0					8
Temporary Structure Reconstruction of Health Facilities (11HFs)		44.0					44
Temporary Structure Reconstruction of Health Facilities (3 HFs)		12.0					12
Temporary Structure Reconstruction of Health Facilities (16 HFs)		64.0					64
Temporary Structure Reconstruction of Health Facilities (17HFs)		68.0					68
Temporary Structure Reconstruction of Health Facilities (10 HFs)		40.0					40
Temporary Structure Reconstruction of Health Facilities (25 HFs)		100.0					100
Temporary Structure Reconstruction of Health Facilities (45 HFs)		180.0					180
Temporary Structure Reconstruction of Health Facilities (0)		0.0					0
Temporary Structure Reconstruction of Health Facilities (19 HFs)		76.0					76
Temporary Structure Reconstruction of Health Facilities (22 HFs)		88.0					88
Temporary Structure Reconstruction of 57 Health Facilities (18 Districts)		226.0					226

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Reconstruction of Permanent Structure in 31 Districts to Restore the Quality Health Services.						
Permanent Structure Reconstruction of Health Facilities (27 HFs)	22.0	110.0	132.0	110.0	66.0	440
Permanent Structure Reconstruction of Health Facilities (41 HFs)	33.4	167.0	200.4	167.0	100.2	668
Permanent Structure Reconstruction of Health Facilities (29 HFs)	23.6	118.0	141.6	118.0	70.8	472
Permanent Structure Reconstruction of Health Facilities (58 HFs)	47.3	236.4	283.6	236.4	141.8	945
Permanent Structure Reconstruction of Health Facilities (104 HFs)	84.8	423.8	508.6	423.8	254.3	1,695
Permanent Structure Reconstruction of Health Facilities (44 HFs)	35.9	179.3	215.1	179.3	107.6	717
Permanent Structure Reconstruction of Health Facilities (43 HFs)	35.0	175.2	210.3	175.2	105.1	701
Permanent Structure Reconstruction of Health Facilities (6 HFs)	4.9	24.5	29.3	24.5	14.7	98
Permanent Structure Reconstruction of Health Facilities (34 HFs)	27.7	138.5	166.2	138.5	83.1	554
Permanent Structure Reconstruction of Health Facilities (51 HFs)	41.6	207.8	249.3	207.8	124.7	831
Permanent Structure Reconstruction of Health Facilities (16 HFs)	13.0	65.0	78.0	65.0	39.0	260
Permanent Structure Reconstruction of Health Facilities (20 HFs)	16.3	81.5	97.8	81.5	48.9	326
Permanent Structure Reconstruction of Health Facilities (18 HFs)	14.7	73.4	88.0	73.4	44.0	293
Permanent Structure Reconstruction of Health Facilities (68 HFs)	55.4	277.1	332.5	277.1	166.3	1,108
Permanent Structure Reconstruction of 329 Health Facilities (17 Districts)	268.1	1,340.7	1,608.8	1,340.7	804.4	5,363
Repair of Partially Damaged Health Facilities in 31 Districts to ensure health services can be provided in a safe manner.						0
Repair of 167 Health Facilities (14 Districts)	127.8					128
Repair of 216 Health Facilities (17 Districts)	64.8					65
Program 2: Provide Procurement and distribution of equipment, drugs and other and non medical supplies for 31 districts (255 HFs in 14 most affected districts and 329 HFs in 17 affected districts)						
Additional Medical Equipment Needed for 14 Earthquake Most Affected Districts	15.3	76.5	91.8	76.5	45.9	306
Medical Equipment and Non Medical Supplies (17 Earthquake Affected Districts)	19.7	98.7	118.4	98.7	59.2	395
Program 3 Strengthening Health Information System - In the essence of building back better in the earthquake affected districts and ensure quality data for evidence based decision making at all level (31 most affected districts)						

Electronic reporting from public health facilities (PHCCs and Health Posts) in all 14 earthquake affected districts	6.0	30.0	36.0	30.0	18.0	120
Electronic Health Record system (complete hospital info system) in hospitals in all 14 earthquake affected districts	1.0	5.0	6.0	5.0	3.0	20
Establishment and operationalization of central data bank with adequate server capacity at central level	0.5	2.5	3.0	2.5	1.5	10
Re-engineering of HuRIS aligning with personnel information system (PIS) at central level	0.3	1.3	1.5	1.3	0.8	5
Develop and implement interoperability framework and standards to ensure functional health information exchange at all levels	0.3	1.3	1.5	1.3	0.8	5
Strengthen and standardize management information systems (MISs) within five Councils to establish minimum data set for health work force at MoH	1.0	5.0	6.0	5.0	3.0	20
Program 4: Health Sector Emergency Preparedness, Response and Disaster Risk Reduction (DRR) Planning						
To develop contingency Plan on responding to any disasters in the districts with partners. It links with DDRC Disaster Preparedness Response Planning (DPRP).	0.63	3.15	3.78	3.15	1.89	13
Capacity building programs on MCM, Triage, referral system, MISP, ASRH in emergencies, First Aid, information recording/reporting, orientation on protocols (31 Districts)	2.59	12.95	15.54	12.95	7.77	52
Simulation exercise to test CP and MCM plan at DHO and Hospital(31 Districts)	1.09	5.43	6.51	5.43	3.26	22
Rapid Response Team Training (including orientation on referral system, tools and formats, PH guidelines, information management recording reporting)	0.83	4.13	4.95	4.13	2.48	17
Orientation on Diseases Surveillance including EWARS(31 Districts)	0.62	3.10	3.72	3.10	1.86	12
Orientation on Hub hospitals, HEOC(31 Districts) to communicate to HEOC for having appropriate and adequate response support during any incidents.	3.01	15.05	18.06	15.05	9.03	60
Prepositioning: Medical tents, essential medicine (buffer stocks), medical/surgical equipment, life-saving drugs, power backups(generators, fuel, solar etc.) for 31 Districts	54.40	81.60	68.00	40.80	27.20	272
Non-structural assessment/mitigation (31 Districts)	2.33	11.63	13.95	11.63	6.98	47

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Program 5: Provision for quality newborn, child, maternal, sexual and reproductive health services (31 Districts) - Capacity Building, Construction ofmaternity waiting homes/health huts Comprehensive medical camps Provision of new born services in hospital settings Rehabilitate ARV centers and PMTCT services	4.14	20.68	24.81	20.68	12.41	83
Program 6: Mental Health, Clinical Management of Rape and psychosocial counseling support	4.4	22.2	26.6	22.2	13.3	89
Program 7: Special Campaign for Immunization	3.00	15.00	18.00	15.00	9.00	60
Program 8: Outbreak response and diseases surveillance	20.00	30.00	25.00	15.00	10.00	100
Program 9: Behavior Changed Communication for community mobilization and increase health seeking behaviors	3.50	17.50	21.00	17.50	10.50	70
Program 10: Monitoring, Supervision and Evaluation including study on socio demographic impact of the earthquake of Post Disaster Recovery (31 Districts)	1.56	7.78	9.33	7.78	4.67	31

Sector Action Plan (SAP)

Nutrition



Post-Disaster Recovery Framework, 2073

May 2016

NUTRITION

1. Situation Analysis

The earthquake on 25 April 2015 and the subsequent aftershock on 12 May 2015 have had a devastating impact in Nepal, affecting 35 of the country's 75 districts. An estimated 9.3 million people have been affected, of whom nearly 1 million are children under 5 years of age and over 300,000 are pregnant and breastfeeding women. With the continued aftershocks, lack of essential water, sanitation and hygiene, worsening seasonal conditions (rain and cold) and limited access to nutrition and health services, the humanitarian situation was worsening. Overcrowding of temporary camps made women and children more vulnerable to infection and disease, and with the onset of the monsoon in late June the numbers of affected women and children were anticipated to rise.

Nepal has persistent high rates of malnutrition, which has been a longstanding problem. According to the Multiple Indicator Cluster Survey (MICS) conducted in 2014, key indicators show a high burden of malnutrition among children below five years of age, including stunting and wasting that currently stand at 37.5 and 11.3 per cent respectively. Moreover, infant and young child feeding (IYCF) practices were also found to be suboptimal in those districts (Table 1). All of

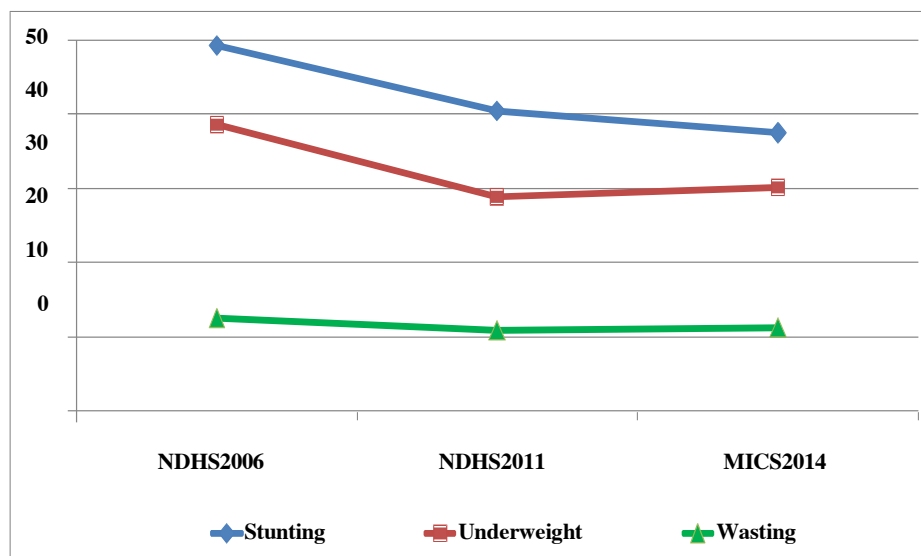


Figure 1: Undernutrition Rates in children aged under five years (per cent)

these factors have adversely impacted and worsened the nutritional status of pregnant women and the youngest, most vulnerable children. In the past five years, the prevalence of underweight children, (the Millennium Development Goal [MDG] indicator for nutritional status), and wasting in children under five has increased (Figure 1).

These children already have a very low immune system. Frequent interruptions in infant feeding practices due to displacement, poor hygienic conditions or sanitation and limited access to health facilities further threaten the survival of acutely malnourished children. Given its cross-cutting

nature, the nutrition sector does not have a separate infrastructure to operate nutrition programming. Nutrition interventions are provided through health facilities and community-based extension services provided by Female Community Health Volunteers (FCHVs). Similarly, nutrition-sensitive interventions are provided through related sectors such as education, agriculture and water, sanitation and hygiene. Hence, the damage caused by the earthquake in these sectors also ultimately impact nutrition. A post-earthquake needs assessment found that food consumption practices had worsened in the affected districts compared to pre-earthquake assessment data. This will directly impact on the nutritional status especially of children under five years of age and pregnant and lactating women who constitute the primary vulnerable groups for undernutrition in the 14 earthquake-affected priority districts.

Table 1: Nutrition status and IYCF practices for children aged under five years

S N	District	Eco- dev region	Low birth weight (%)	Anthropometry, children 0-59 months (%)				Infant and young child feeding (IYCF) (%)		
				Stunting		Wasting		Initial breastfeedi ng (within an hour of birth)	Exclus ive breast- feedin g	Minim um accept able diet
				<-2S D	<-3S D	<-2S D	<-3S D			
1	Bhaktapur	Central Hill	23.7	27.7	11.5	5.9	4.4	45.6	54.3	38.6
2	Dhading									
3	Kathmandu									
4	Kavrepalanch wok wk									
5	Lalitpur									
6	Makwanpur									
7	Nuwakot									
8	Ramechhap									
9	Sindhuli									
10	Dolakha	Central	21	36.6	16.4	7.3	1.2	74.6	38.9	20.3

11	Rasuwa	Mountain								
12	Sindhupalchok									
13	Okhaldhunga	Eastern Hill	26.6	26.9	9.9	10.8	4.2	43.9	35.5	46.8
14	Gorkha	Western Hill	23.3	37.6	12.9	7.4	3.8	45.3	68.9	41.5

2. Strategic Recovery Vision

Post-earthquake recovery activities will include the continuation of services to prevent and treat acute malnutrition, with increased efforts to improve nutrition services and a system contributing to nutrition gains in the longer term that will focus on a multi-sectoral approach. The Ministry of Health will coordinate with other sectors for nutrition sensitive interventions and implement nutrition specific interventions in the 14 earthquake-affected priority districts. In general, the post-disaster nutrition recovery strategy will complement the knowledge and practices that the communities already have, and also supplement the gaps identified in the PDNA and experienced in nutrition interventions from May to December 2015. The strategy focuses to address the issues of maternal, infant, young child nutrition and supports for overall child development matters as well as reduction of the stunting in a long run.

Further, the achievement of defined nutrition goals requires action from various sectors. Recognising the need for a multi-sectoral approach and for strengthened multi-sectoral policy guidance and coordination, the Government of Nepal endorsed a Multi-sector Nutrition Plan (MSNP) in 2012 and a High-Level National Nutrition and Food Security Steering Committee (HLNFSSC) has been established, led by the Vice Chair of the National Planning Commission. A coordination architecture has likewise been set up. In order to initiate the nutrition recovery programme, existing policies on nutrition-specific and nutrition-sensitive programmes and interventions will be strengthened, with the involvement of all relevant sectors and stakeholders in the earthquake-affected 14 priority districts. Through this mechanism, all nutrition service providers will be working together within the existing nutrition architecture at the district as well as at the national level. For this, Ministry of Health will ensure effective coordination and collaboration with different sectors at different levels.

3. Current Status of Ongoing Recovery Efforts in Nutrition

As soon as the nutrition response phase was over by the end of September 2015, post-earthquake recovery action was initiated to address the nutrition issues of children and pregnant and lactating women in the 14 earthquake-affected priority districts. To implement nutrition recovery action, the Child Health Division (CHD) of the Ministry of Health (MoH) and UNICEF, along with other partners, are engaged together to achieve the planned targets for building back better through

resilient nutrition interventions, capacity-building of stakeholders, communities and key service providers.

The nutrition recovery action plan in the 14 priority districts was developed based on the outcomes of the lessons learnt workshop on nutrition response, outcome of the review meeting held in each of the program districts with nutrition cluster, respective District Disaster Relief Committees (DDRCs), implementing partners and key actors in the district; recommendations of the Post Disaster Needs Assessment (PDNA) and the compilation of district planning processes for nutrition recovery action.

Since the beginning of response phase, 355,022 out of 476,655 (74%) children from the priority districts have been reached through screening until the end of April 2016. In the meantime, 348 SAM and 4,310 MAM cases have been identified out of them 91 SAM and 694 MAM children have been admitted for appropriate treatment. Total 321,571 children age 6-59 months have been provided with MNP and 305,028 children age 12-59 months have been provided with deworming. Similarly, additional 2,396 pregnant and lactating women received IFA who were not enrolled in the regular IFA distribution.

4. Objectives, Expected Results and Indicators

The nutrition recovery objectives, strategies, results, target and indicators have been identified based on the PDNA outcomes for short and medium to long term and are aimed at all pregnant and lactating women and children under five years. Special efforts will be made to work through the community leaders, health system and structures as well as FCHVs, to ensure that the most vulnerable groups such as; disadvantaged communities/casts, female headed households, and others will be focused. By following the human right principles such as; universality, accountability, indivisibility, participation and equity, the recovery programme will be aligned with national nutrition outcomes as defined in the National Multi sectoral Nutrition Plan. Therefore the following defined objectives, expected results, set target and indicators focus to support for achieving improve overall nutrition outcomes of the national multi sectoral nutrition plan (MSNP).

1.1. Overall Objective:

The overall objective of the nutrition recovery programme is to “protect the lives and support development milestones of children and pregnant and lactating women (PLW) in 14 earthquake-affected priority districts, through a timely and effective humanitarian response to nutritional needs to minimise mortality and morbidity of the population. Increase in malnutrition among children under five and lactating and pregnant women has been prevented in emergency or disaster-affected areas.”

1.2. Specific Objectives:

The following are the specific objectives for the programme:

- Promote, protect and support IYCF including breastfeeding and complementary feeding
- Treat moderate and severe acute malnutrition including medical complications among children under five years of age, pregnant and breastfeeding women

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- Prevent micronutrient deficiencies among children under five years of age, pregnant and breastfeeding women through supplementation and diet diversification
- Enhance the capacity of affected families and communities for resilient nutrition response and recovery

1.3. Expected Results:

- Improved maternal, Infant and young child nutrition situation as a result of increased coverage of essential nutrition actions at health facilities and community level
- Improved awareness of and commitment to district as well as community based nutrition priorities
- Functioning and effective, assessment, monitoring and evaluation system for nutrition.

1.4. Specific Targets and Indicators by End of 2021

SN	Nutrition Target	Specific indicators
	> 90 per cent of children aged 6–59 months suffering from severe acute malnutrition (SAM) will attend therapeutic care services at the nearest health facility	<ul style="list-style-type: none"> • # and % of SAM admission • # and % of SAM recovery • # and % of SAM death • # and % of SAM defaulter
	> 75 per cent of children aged 6–59 months suffering from moderate acute malnutrition (MAM) will attend supplementary feeding and care services	<ul style="list-style-type: none"> • # and % of MAM admission • # and % of MAM recovery • # and % of MAM death • # and % of MAM defaulter
	>80 per cent of children aged 6–59 months are covered by essential micronutrient services (micronutrient powder (MNP) and Vitamin A)	<ul style="list-style-type: none"> • # and % of 6-59 months children registered for services • # and % of 6-59 months children completed 60 sachets of MNP as per rules
	>90 per cent of pregnant and postnatal women are covered with iron-folic acid (IFA) services (the current status is 41.1 per cent (over 180 days))	<ul style="list-style-type: none"> • # and % of pregnant and postnatal women registered for services • # and % of pregnant and postnatal women completed IFA tablets as per rules (180 days plus)
	>65 per cent of new-borns will receive early initiation of breastfeeding (within an hour of birth) (the current status is 48.7 per cent)	<ul style="list-style-type: none"> • # and % of new-borns registered for services • # and % of pregnant women and caretakers/mothers of new-borns received counselling services on early initiation of breast feeding

	>70 per cent of children will be exclusively breastfed until the age of 6 months (the current status is 56.9 per cent)	<ul style="list-style-type: none"> • # and % of children age 0-6 months registered for services • # and % of pregnant women and caretakers/mothers of new-borns received counselling services on exclusive breast feeding services
	>70 per cent of children aged 6–23 months will receive minimum acceptable diet practices (the current status for breastfeeding infants is 54.3 per cent).	<ul style="list-style-type: none"> • # and % of children aged 6-23 months registered for services • # and % caretakers/mothers of 6-23 months aged children received counselling services on minimum acceptable diet practices
	Earthquake affected 14 priority districts prepared a plan for emergency prepared and response on nutrition	<ul style="list-style-type: none"> • # of districts have developed emergency prepared and response plan on nutrition

1.0.

The current status is taken from the above table that was set as the baseline in the Post-Disaster Needs Assessment (PDNA) report.

5. Priority Recovery programmes

1.1. The Basis for Identifying Priority Activities

The nutrition recovery programme activities have been identified based on needs and are demand-driven. The following criteria provide the basis for determining nutrition recovery priority activities:

- Recommendations of the PDNA, i.e. short term and medium term to longer terms
- Special focus on the 14 earthquake-affected priority districts
- Lessons learned from the nutrition response programme implemented in the 14 earthquake-affected priority districts
- Outcomes of district and national review meetings of the earthquake nutrition response
- Special focus on children under the age of five years and pregnant and lactating women in hard to reach areas
- Relevant interventions mentioned in Nepal Multi-Sectoral Nutrition Plan (MSNP)
- The nutrition cluster coordination mechanism led by the MoH is a platform for coordination, needs analysis and planning, implementation, monitoring, review and information management
- Focusing on continuing the ongoing programme in the 14 earthquake-affected priority districts
- Health system strengthening to deliver comprehensive nutrition services

1.2. Priority Recovery Programmes for the Nutrition Sector:

Post-disaster recovery needs have been categorised into two groups covering (i) short-term recovery programme and (ii) medium- to long-term recovery programme as follows:

a. Short-term recovery programme (ongoing programme until December 2016)

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The short-term recovery programme has been planned based on the immediate needs of the targeted population groups and also partners' commitments for funding and technical assistance. The programme is ongoing in the 14 earthquake-affected priority districts and will be continued until December 2016.

Table 3: Ongoing programme activities with funding commitments of different partners

Programme description	Target population/districts
Programme 1: Protection, promotion and support for breastfeeding of children aged 0–23 months	215,986
Programme 2: Support for timely and appropriate complementary feeding of children aged 6–23 months	167,565
Programme 3: Management of moderate acute malnutrition through supplementary feeding programme (children aged 6–59 months and pregnant and lactating women)	2,500
Programme 4: Management of severe acute malnutrition through therapeutic feeding programme (children aged 0–59 months and pregnant and lactating women)	10,228
Programme 5: Micronutrients for children and women	MNP: 428,986; Vit A: 428,986; IFA: 204,554; Deworming: 418,547
Programme 6: Establish and strengthen multi-sector coordination, monitoring and review for effective nutrition outcomes	14 districts
Programme 7: Emergency preparedness, prepositioning, disaster risk reduction (DRR) and resilience	14 districts
Programme Support: Strengthening capacity of human resources	FCHVs: 10,000; Health Workers (HWs): 4,000; CSO staff: 1,000 WFC: 5,000; CAC: 500 MTOT: 60 HWs and CSO staff

b. Medium- to long-term nutrition recovery programme (2017–2021)

The programme for the medium to long term has been developed based on the identified priority programme in the PDNA for the medium and long term. It is also planned based on the lessons learned and outcomes of the earthquake emergency response. The medium- to long-term priority programme will be initiated from 2017 to 2021.

Table 4: Priority programmes from 2017 to 2021

SN	Project name (name and/or short description)	Target population	Remarks
1	<p>Programme 1: Promote behaviours to intensify homestead food production, including poultry and food-based nutrition to utilize nutritious indigenous crops as well as protein and micronutrient rich crops, livestock products (including meat, fish, milk and eggs) through:</p> <ul style="list-style-type: none"> • promotion of diversified and nutritious foods • promotion of underexploited traditional foods and home gardens • promotion of fishery and poultry products for household consumption • nutrition education to encourage the consumption of a healthy and nutritious diet year round 	633,540	Under five years children; pregnant and lactating women
2	<p>Programme 2: Continue the intensified promotion of maternal, infant and young child nutrition (MIYCN) through community and health facility based counselling by FCHVs and HWs</p>	633,540	Under five years children; pregnant and lactating women
3	<p>Programme 3: Continue the management of moderate acute malnutrition (MAM) in children below five years of age</p>	215,986	
4	<p>Programme 4: Continue the management of severe acute malnutrition (SAM) in children below five years of age</p>	10,000	
5	<p>Programme 5: Micronutrients for children and women</p> <ul style="list-style-type: none"> • Home fortification of micronutrient powder (MNP) to all children aged 6–59 months through community interventions by FCHVs • Biannual vitamin A supplementation to all children aged 6–59 months through community interventions by FCHVs • Biannual deworming of all children aged 12–59 months (together with vitamin A campaign) • All pregnant and postnatal women will be supplemented with iron and folic acid (IFA) tablets as per regulations • Promotion of zinc supplementation during diarrhoea 	MNP: 428,986 Vit A: 428,986 IFA: 204,554 Deworming : 418,547	
6	<p>Programme 6: Continue and intensify promotion of hygiene and sanitation through community and health facility based counselling</p>		
7	<p>Programme 7: Continue multi-sectoral coordination, monitoring and review for effective nutrition outcomes:</p> <ul style="list-style-type: none"> • Strengthen multi-sectoral coordination • Continuation of monitoring for regulation of Breast Milk Substitutes (BMS) act • Continuation of monitoring and periodic review of the nutrition recovery programme 		14 districts

SN	Project name (name and/or short description)	Target population	Remarks
8	Programme 8: Emergency preparedness, prepositioning, DRR and resilience: <ul style="list-style-type: none"> • Contingency plan review/update/printing • Capacity building programmes on emergency preparedness and response on nutrition • Simulation exercise (nutrition) • Orientation on nutrition information and surveillance including Early Warning and Early Action (EWAS) • Orientation on nutrition in emergency management including DRR on nutrition • Prepositioning (e.g., RUTF, RUSF, anthropometric equipment, MNP, Vit A, F100 and F75) • Non-structural assessment and mitigation 		14 districts

6. Implementation strategy and risk analysis

In order to implement the nutrition recovery programme led by the MoH in 14 priority districts, many national and international partners have been involved, including UNICEF, WHO, WFP, USAID/Suaahara, Save the Children, ACF international, International Medical Corps, Nepali Technical Assistant Group, Nepal Public Health and Education Group, Social Development and Promotion Center, Tamakoshi Sewa Committee and Global Health Alliance Nepal. At the VDC and community levels, local health posts, FCHVs, Mothers' Group, Citizen Awareness Center and Ward Citizen Forum are the front line partners who are currently supporting implementation of the nutrition recovery initiative on the ground.

Limited technical knowledge and programmatic skills among the stakeholders at various levels and limited understanding of nutritional issues among the population is a challenge to running nutrition interventions smoothly. Similarly, clear institutional arrangements and effective multisectoral coordination and collaboration are key matters for ensuring effective PDRF nutrition interventions.

In order to address these issues, the national nutrition cluster/sector, led by MoH jointly with nutrition cluster/sector partners, has been planning to build the capacity of stakeholders at various levels through a number of training programs, such as MToT, DToT, health workers' training, FCHV's training and WCF/CAC orientation. In the meantime, capacity building of the implementing partners' staff is ongoing, so as to achieve the desired outcome of nutrition recovery in the 14 priority earthquake-affected districts. Similarly, to address the key issues and effective implementation of the PDRF nutrition programme, the following recommendations will be adopted by MoH at all levels:

- The Ministry of Health is the lead agency of the Government of Nepal for implementing the nutrition recovery programme in earthquake-affected districts. Therefore, MoH will involve national and international partners for effective implementation of the nutrition recovery programme.

- The Ministry of Health will coordinate with the NRA, the NPC and concerned government authorities, external development partners (EDPs) and national and international NGOs, to assure necessary funding to implement priority programmes.
- The existing coordination arrangements will be continued at the district level through effective nutrition cluster coordination, led by District Health Offices (DPHO), involving key actors and partners. The existing cluster coordination mechanism will be further strengthened.
- In order to implement the programme effectively, coordination with other sectors is essential. Therefore, as guided by the Nepal Multi-Sectoral Nutrition Plan, a multi-sectoral architecture will be established at the district, VDC and municipality levels for effective coordination, further planning, monitoring and review of the nutrition programme.
- In order to implement the programme in a timely and effective manner, MoH will involve national and international organisations and partners and civil society organisations based on their capacity and past performance.

Multi-sectorality, coordination, bottom-up planning and mobilisation of community-based organisations are the key to empower the people for better nutrition outcomes. Strengthening local governance mechanisms for nutrition, strengthening capacity of service providers at district and community levels and social mobilisation are the key strategies for better service delivery and community resilience for better nutrition. Until and unless awareness among families and communities is raised, it is quite difficult to achieve the desired outcome. To address cross-cutting issues - such as gender and social disparities, environmental sustainability and preparedness for the possible future disaster events - empowerment of community members, raising their awareness and building their capacity are tackled side by side. This combination will help to improve community resilience and reduce vulnerability.

7. Financial Requirements and Planning (as per the attached template):

Table 5: Ongoing programme activities for 2016 with funding commitments of different partners

Programme description	Estimated budget (million NPR)	Partners
Programme 1: Protection, promotion and support for breastfeeding of children aged 0–23 months	50	<ul style="list-style-type: none"> • Save the Children, • ACF international,
Programme 2: Support for timely and appropriate complementary feeding of children aged 6–23 months	50	<ul style="list-style-type: none"> • Nepali Technical Assistant Group, • Nepal Public Health and Education Group,
Programme 3: Management of moderate acute malnutrition through supplementary feeding programme (children aged 6–59 months and pregnant and lactating women)	286.2	<ul style="list-style-type: none"> • Social Development and Promotion Center, • Tamakoshi Sewa Committee

2	Programme 2: Continue the intensified promotion of maternal, infant and young child nutrition (MIYCN) through community and health facility based counselling by FCHVs and HWs	100.0	100.0	100.0	100.0	100.0	500.00
3	Programme 3: Continue the management of moderate acute malnutrition (MAM) in children below five years of age	615.6	615.6	615.6	615.6	615.6	3,078.00
4	Programme 4: Continue the management of severe acute malnutrition (SAM) in children below five years of age	150.0	150.0	150.0	150.0	150.0	750.00
5	Programme 5: Micronutrients for children and women	225.0	225.0	225.0	225.0	225.0	1,125.00
6	Programme 6: Continue and intensify promotion of hygiene and sanitation through community and health facility based counselling	44.0	44.0	44.0	44.0	44.0	220.00
7	Programme 7: Continue multi-sectoral coordination, monitoring and review for effective nutrition outcomes:	44.0	44.0	44.0	44.0	44.0	220.00
8	Programme 8: Emergency preparedness, prepositioning, DRR and resilience	60.8	60.8	60.8	60.8		243.00
	Total 2017 - 2021	1,504.35	1,504.35	1,504.35	1,504.35	1,443.60	7,461.00

Note: More detail on the short-term plan is provided in Excel sheet 2 and 3

d. Rationale for financial estimations:

The financial estimates are significantly higher than the PDNA recommendations, for the following reasons:

- The PDNA recommendations were only for three years. But the PDRF on nutrition has been proposed for 6 years i.e. (i) ongoing programme in 2016 with fund commitments, and (ii) priority programmes for 2017 –2021,
- PDNA recommendations were only based on the immediate situation in the immediate few weeks following the earthquake, when nutrition response action was just started and not managed very systematically. The current recovery programme has now been planned in a more systematic way,

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- The nutrition recovery programme has been designed/planned based on the experiences and lessons learned of nutrition response at district and central levels. District level reviews in all 14 priority districts and national review workshops were organised to assess the impact and progress of the emergency nutrition response in October 2015. The outcomes and recommendations of these workshops were operationalised for nutrition recovery programmes.

Nutrition

TABLE: FINANCIAL REQUIREMENTS FOR PRIORITY RECOVERY PROGRAMME

	Year	2016	2017	2018	2019	2020	Total
	Budget in Million NPR	1,504	1,504	1,504	1,504	1,444	7,461
Program							
Programme 1: Promote behaviors to intensify homestead food production including poultry and food based nutrition to utilize nutritious indigenous crops as well as protein and micronutrient rich crops, livestock products (including meat, fish, milk and eggs, etc.) through;							
i. promotion of diversified and nutritious foods		265	265	265	265	265	1,325
ii. promotion of underexploited traditional foods and home gardens							
iii. promotion of fishery and poultry products for household consumption							
iv. nutrition education to encourage the consumption of a healthy and nutritious diet year round.							
Programme 2: Continue the intensified promotion of Maternal, Infant and Young Child Nutrition (MIYCN) through community and Health Facility based counselling and supports by FCHVs and HWs		100	100	100	100	100	500
Programme 3: Continue the management of Moderate Acute Malnutrition (MAM) of the children below five years of age		616	616	616	616	616	3,078
Programme 4: Continue the management of Severe Acute Malnutrition (SAM) of the children below five years of age		150	150	150	150	150	750
Programme 5: Micro-nutrients for Children and Women							
i. Home fortification of Multiple-micro-nutrient powder (MNP) to all 6-59 months children through community interventions by FCHVs		225	225	225	225	225	1,125
ii. Bi-annual vitamin A supplementation to all 6-59 months children through community interventions by FCHVs							
iii. Deworming to all children age 12-59 months will be de-worm in each 6 months along with bi-annual vitamin A campaign							
iv. IFA for pregnant and postnatal women to all pregnant and postnatal women will be supplemented with Iron and Folic Acid tablets as per rules							
v. Promotion of zinc supplementation during diarrhoea							

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<p>Programme 6: Continue and intensify promotion of Hygiene and Sanitation through community and Health Facility based counselling:</p>	44	44	44	44	44	220
<p>MoH will integrate WASH with health and nutrition and along with IYCF counselling, hygiene and sanitation promotion will be initiated at community levels by health workers, FCHVs and D/WASHCC and V/WASHCC.</p>						
<p>Programme 7: Continue the multisectoral coordination, monitoring and review for effective nutrition outcomes:</p> <p>i. Strengthen multi-sectoral coordination</p> <p>ii. Continuation of monitoring for regulation of BMS act</p> <p>iii. Continuation of monitoring and periodic review of nutrition recovery programme</p>	44	44	44	44	44	220
<p>Programme 8: Emergency Preparedness, prepositioning, DRR and Resilience:</p> <p>i. Contingency Plan review/update/printing</p> <p>ii. Capacity building programs on emergency preparedness and response n nutrition</p> <p>iii. Simulation exercise (nutrition)</p> <p>iii. Orientation on Nutrition Information and Surveillance including EWARS</p> <p>iv. Orientation on nutrition in emergency management including DRR on nutrition</p> <p>v. Prepositioning (RUTF, RUSF, anthropometric equipment, MNP, Vit A, F100, F75 etc...)</p> <p>vi. Non-structural assessment/mitigation</p>	61	61	61	61		243

Sector Action Plan (SAP)

RURAL HOUSING AND COMMUNITY INFRASTRUCTURE

Post-Disaster Recovery Framework, 2073



May 2016

RURAL HOUSING AND COMMUNITY INFRASTRUCTURE

1. Situation Analysis

The 2015 earthquake in Nepal destroyed and damaged almost 1,000,000 million houses making housing the single largest and most urgent recovery need. The earthquake also caused widespread damage to community infrastructure such as small-scale facilities owned, planned, built, operated or maintained through active participation of the community. This in turn affects mobility and the ability of communities to access basic services and economic opportunities in the public and private sector. To ensure appropriate attention to and address the specific needs of urban areas, urban reconstruction has been dealt with as a separate sector in this recovery framework. Rural housing on the other hand is mostly self-built and self-serviced through more closely knit community networks and neighbourhoods within a largely agrarian socio-economic set up. Rural housing and community infrastructure were addressed separately in the Post-Disaster Needs Assessment (PDNA), but are combined here to encourage an integrated habitat approach to reconstruction. Together, rural housing and community infrastructure reconstruction have the greatest potential to restore livelihoods and generate economic opportunities in affected communities, particularly for women, youth, poor and marginalised groups. Therefore, this section includes recovery needs for rural housing as well as community infrastructure such as trails, trail bridges, community buildings and other micro-facilities managed by the community. Recovery needs for other rural infrastructure (e.g., drinking water, irrigation, rural roads and electricity) are covered in relevant sector reports. Given the scale of destruction and the urgent need to rebuild and restore services, the responsibility for implementation must be shared among as many qualified partners as possible. It is essential for the Government and all actors to use a uniform approach to ensure that financial and technical assistance is provided in a standardised, equitable and transparent manner.

The PDNA estimates based on early damage assessment have been updated in the SAP based on subsequent detailed damage assessments. The rural housing and community infrastructure action plan financial projections are for 11 of the 14 priority affected and mainly rural districts, plus the 17 less affected and mainly rural districts. In these 28 districts an estimated 625,000 houses were destroyed or had major damage, 180,000 houses had minor damage. The 3 valley districts have an estimated 100,000 fully destroyed or had major damage and 85,000 had minor damage. This urban / rural district wise division is for the purpose of estimation only, there are urban municipalities within the mainly rural districts, and rural VDCs within the mainly urban districts and the appropriate rural and urban recovery strategies will be applied accordingly.

11 priority	mainly rural	Gorkha, Dhading, Rasuwa, Nuwakot, Makwanpur, Kabhrepalanchowk, Sindhupalchowk, Dolakha, Ramechhap, Sindhuli. Okhaldunga
3 priority	mainly urban	Kathmandu. Bhaktapur, Lalitpur
17 less priority	mainly rural	Baglung, Gulmi, Argakhanchi, Myagdi, Parbat, Syanja, Palpa, Nawalparasi, Tanahu, Kaski, Lamjung, Chitwan, Solukhumbu, Khotant, Sankhuwasabha, Bhojpur, Dhankuta

2. Strategic Recovery Vision for the sector

Recognising that housing is largely a people-led process, the Government of Nepal has adopted an owner driven reconstruction approach with the objective of enabling affected house owners to reconstruct their homes in a disaster resistant manner along with basic services and infrastructure so that the communities become resilient in the long term. The Government of Nepal seeks to coordinate rural housing and community infrastructure taking an integrated habitat perspective to improving civic services and enhancing livelihoods. The guiding principles articulated in the PDNA are proposed to be translated into policy and an implementation framework in the following manner:

1. Recovery should empower individuals, families and communities to take control of their own recovery. An owner-driven approach will facilitate their access to uniform and equitable financial assistance in tranches, timely technical guidance on disaster resilient technologies, cost effective building material, trained skills and safer land.
2. Take a settlement approach, involving the principles of holistic habitat, ensuring sustainable and environmentally conscious processes considering issues such as climate change, natural resource management and risk assessments.
3. Recovery should become a vehicle for building long term community resilience.
4. Strengthen the local economy by creating livelihood opportunities.
5. Recovery should be equitable and inclusive, with equal rights to land and property accorded to women.
6. Decision-making and service provision is proposed to be decentralised to the local level in a highly participatory framework to address diverse communities and conditions with a particular focus on needs of vulnerable and marginalised households.
7. Collaboration among government, non government, civil society, private sector and communities will ensure informed and common purpose, shared responsibility and harness and optimise capacities for implementation.

Strategic Objective 1	Accelerate housing reconstruction by all affected
Strategic Objective 2	Ensure safe, quality and sustainable housing reconstruction
Strategic Objective 3	Rehabilitate landless and mitigate land risks
Strategic Objective 4	Strengthen the construction material and labour supply chain
Strategic Objective 5	Habitat recovery : rehabilitation of community infrastructures
Strategic Objective 6	Strengthen social and economic recovery through housing recovery
Strategic Objective 7	Strengthen Governance capacities to manage housing recovery
Strategic Objective 8	Build resilience to climate change and natural disasters

3. Current status of ongoing recovery efforts in the sector

Shelter was a priority sector immediately after the disaster, addressed by the Ministry of Urban Development (MoUD) and Ministry of Federal Affairs and Local Development (MoFALD) at national and district levels in collaboration with a wide range of humanitarian and development partners. Both ministries continue to play key roles in the planning and implementation of housing and community infrastructure recovery activities, under the coordination and direction of the National Reconstruction Authority.

Shelter situation : Over 90% of earthquake affected households have constructed weather proof temporary shelter. They were supported by government and humanitarian cash distributions which promoted the recovery of local markets, distributions of CGI sheets, plastic sheeting and other shelter material and technical assistance. 80 % rural households salvaged building materials for shelter and reconstruction. Market assessments show a 40% increase in costs for skilled and unskilled labour and 20-50% increase in costs for key materials. The economic crisis during last winter affected the availability and cost of materials and their transportation, constraining reconstruction activity.

Detailed assessments since the PDNA, 1) Housing damage and eligibility survey, 2) community infrastructure damage and needs : A comprehensive, detailed and transparent door-to-door housing damage and socio-economic survey has been conducted by Central Bureau of Statistics (CBS) to confirm the extent of housing damage, to identify eligible households and to inform programming for reconstruction. Since the PDNA, the Ministry of Federal Affairs and Local Development has collected community infrastructure reconstruction costs from its field agencies in 31 districts. In addition to the CBS and DOLIDAR surveys, shelter, housing and community infrastructure thematic assessments (displacement, building typologies, markets, skills, trails) have been carried out by concerned departments, research and implementing agencies.

Estimation of housing damage and eligibility for financial assistance

Findings based on analysis¹¹ of the CBS housing survey indicate that approximately 625,000¹² houses were destroyed or had major damage rural districts and 180,000 had minor damage in the 11 priority affected and 17 less affected mainly rural districts. This represents a large increase from PDNA estimates of 426,453 destroyed, and a small decrease from 191,003 damaged. The main reasons for the increases are as follows: 1) *the number of houses affected is higher than estimated:* 617,456 houses were estimated affected in the PDNA, now increased to 805,000 affected following the ground survey. 2) *the proportion of fully destroyed and major damage vis a vis minor damage is higher than estimated:* the ratio of fully destroyed and major damage to minor damage in the PDNA was 69%; 31%, from the survey the ratio is 78%: 22%, reflecting the vulnerability of rural housing construction. Of the 805,000 affected, 625,000 are fully destroyed or had major damage, 180,000 had minor damage.

The survey indicates quarter of the affected households are located above 1500m, over 400 VDCs have over 80% completely destroyed houses and over one fifth of affected households have already

¹¹Analysis based on extrapolation of data from 60% of VDCs, full analysis available end May.

started reconstruction. . Analysis of survey data on socio economic vulnerability, displacement and other topics will contribute to planning for supplementary assistance.

Ongoing work: is categorised into four main areas : 1) establishment of the housing programme systems, policies, information management, standard operating procedures and guidelines, technical standards and other resources, 2) establishment of capacity for implementation of the housing programme, recruitment and training of central, district and field staff including over 1000 engineers for housing inspection and technical support, 3) enrolment of eligible households and disbursement of first tranche financial assistance and associated development of financial services, 4) technical assistance activities including training, demonstration houses, community mobilisation and outreach, mainly by partner organisations. While there are several housing support initiatives underway coverage of activities and funding is uneven with large gaps in the less affected districts, many organisations are uncertain about plans, highlighting the need for increased coordination, communication and clarification on policies, financial and technical assistance strategies.

Under the rural housing and community infrastructure recovery framework, the National Reconstruction Authority will coordinate the development of detailed strategies for the following: 1) housing, 2) community infrastructure, 3) land and relocation, including technical assistance and training, finance, inclusion and vulnerability, material supply, monitoring and evaluation.

4. Expected sector results and indicators

The identified Strategic Objectives, Indicators and Programmes within the SAP are identified as follows:

<i>Strategic Objective</i>	<i>Indicators</i>	<i>Programme / Activity</i>
<i>Strategic Objective 1:</i> Accelerate housing reconstruction by all affected populations	<i>Number of houses reconstructed, Interim stage completion, Number of houses repaired,</i>	Conduct detailed damage assessment, database of eligible households and information management system for housing reconstruction
		Provide uniform conditional housing grant of NPR 200,000 in 3 installments for reconstruction to all eligible households.
		Provide additional cash top-up or material/labour subsidy worth NPR 50,000 for vulnerable households
		Provide additional cash top-up or material/labour subsidy worth NPR 50,000 for designated remote or special status areas.
		Temporary shelter support, cash subsidy, material or labour for monsoon and/or winter.
		Provide cash/material/labour subsidy worth NPR 30,000 for repair of damaged and retrofitting of vulnerable houses.
<i>Strategic Objective 2:</i> Safe, quality and sustainable housing reconstruction	<i>Rate of compliance with construction standards, Rate of adoption of environmentally sustainable services, Rate of heritage rehabilitation, Increased skills, knowledge and awareness among target groups. (KAP survey)</i>	Develop appropriate hazard resistant standards, inspection criteria for compliance, and technical information and guidance materials for a range of construction typologies for houses and community infrastructure, for sustainable household services (water, sanitation, energy) and for culturally appropriate rehabilitation of heritage.
		Strengthen enforcement capacity, to carry out building stage inspection for compliance with standards and certification for disbursement of housing grant and additional subsidies.
		Mass communication of housing policies, standards, inspection and guidance.

		Training of technical professionals, construction workers, communities and households.
		Support to outreach services : household and community orientation, on-site support, field promotion and demonstration.
Strategic Objective 3: Resettle landless and mitigate land risks	Number of households: assessed/ documentation resolved /relocated/ mitigated.	Strengthen institutional and technical capacity for land related policies and programme implementation including risk assessment.
		Resolve land documentation and land tenure status issues.
		Advisory and support services for relocation (assessment of geological and hydrological risks, site specific technical advice, information, community engagement, land transfer and legal support).
		Facilitate self-relocation through the provision of cash subsidies for site acquisition, linked to housing reconstruction subsidy.
		Community relocation to new sites, acquisition of land, development of infrastructure, linked to housing reconstruction subsidy.
		Risk management planning and risk mitigation works in existing villages.
Strategic Objective 4: Strengthen the construction material and labour supply	Volume/number , availability, cost and quality of key construction materials/ labour for housing reconstruction	Develop mechanisms for construction materials market monitoring and analysis, stakeholder engagement, policy and regulatory measures
		Rehabilitate and strengthen local construction materials distribution networks, markets, transportation. Technical and financial assistance.
		Rehabilitate and strengthen local construction material production capacity, technical and financial assistance
		Conduct vocational trainings to produce new masons
		Establish quality control and quality assurance mechanisms for construction materials and skills
Strategic Objective 5:	Number of community infrastructure rehabilitated	Strengthen institutional and technical capacity to plan and manage community infrastructure rehabilitation and development,

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<p>Sustainable</p> <p>Habitat recovery : rehabilitation of community infrastructures</p>	<p><i>and operational in the affected areas.</i></p> <p><i>Number of communities with recovery plans</i></p>	<p>Develop appropriate hazard resistant standards, inspection criteria for compliance, and technical information and guidance materials for community infrastructure</p>
		<p>Strengthen community capacity to plan and implement community infrastructure, community based risk management and sustainable settlements.</p>
		<p>Rehabilitate and improve trails, trail bridge and local access</p>
		<p>Rehabilitate and improve community livelihoods and enterprise infrastructure.</p>
		<p>Rehabilitate and improve community infrastructure through block grants / community contracts or direct implementation.</p>
		<p>Ensure that environmental safeguards are applied.</p>
<p>Strategic Objective 6:</p> <p>Strengthen social and economic recovery through housing recovery</p>	<p><i>Reconstruction by vulnerable households.</i></p> <p><i>Inclusive participation in decision making and implementation.</i></p> <p><i>Access to financial services.</i></p> <p><i>Household income levels</i></p>	<p>Setup up system for social safeguards monitoring, grievance redressal mechanisms.</p>
		<p>Provide targeted support for vulnerable individuals, households and communities</p>
		<p>Ensure community mobilization, strengthen local engagement mechanisms, representation and decision making, by women and men, elderly and youth, minorities.</p>
		<p>Ensure the specific capacities and needs of women are considered and addressed in recovery.</p>
		<p>Ensure the specific needs of disabled and elderly are considered and addressed in recovery</p>
		<p>Extend and strengthen financial services, promote of financial literacy</p>
		<p>Promote skills and employment opportunities of local people in housing and community infrastructure reconstruction and rehabilitation.</p>
<p>Strategic Objective 7:</p>	<p>Create appropriate environment for policy development, programme planning, implementation, quality assurance, monitoring and evaluation activities</p>	

Strengthen Governance capacities to manage housing and settlement recovery	<i>Strengthen performance among institutions involved in implementation of Sector Action Plan</i>	Strengthen central and local governments' capacity, premises rehabilitation, logistics, increased staffing, training and continued development.
		Ensure communication, public access to information, consultation and accountability.
		Setup coordination mechanisms between NRA, line ministries and departments, donors, I/NGOs, civil society, private sector, etc., at central and local levels.
		Develop an institutionalization strategy for policies, standards, curricula, staffing, systems developed through the recovery programme.
Strategic Objective 8: Build resilience to climate change and natural disasters	<i>Community based adaptation through sustained practice of safer and better housing construction and settlement</i>	Improve organizational capacity and individual knowledge and expertise of government officials, technical professionals and development personnel to promote safer and sustainable housing and settlements.
		Promote research and development on existing and emerging technical issues, social processes in recovery, economic impact
		Prepare community plans for disaster risk management and risk reduction.
		Ensure there is sustained communication campaign, community engagement, training and technical assistance throughout recovery duration. Construct demonstration buildings for long term reference and promotion.
		Promote community learning including community exchange during recovery.

Note: Several activities such as training, information, and financial assistance contribute to meeting more than one strategic objective.

5. Priority Recovery programmes

Sequencing and prioritisation

Housing and community infrastructure rehabilitation and reconstruction across the affected districts will involve a large scale effort and the mobilisation of resources by households, communities, construction workers, private sector, government and assistance agencies. The role of the Government of Nepal is to develop an enabling environment to facilitate and guide all stakeholders, to promote building back better objectives in reconstruction and longer term improvements in housing and settlement practices. While key decisions and mechanisms will be introduced from the outset including the government subsidy for housing reconstruction, additional measures will continue to be developed in more detail. Housing reconstruction is expected to take five years considering the extent of losses, constraints in building seasons and in finance, material and labour supplies. Strategic investment in policies, programmes and capacities in the preparatory phase or first year will enable full speed and scale reconstruction during the subsequent medium term phase. Years four and five will include completion, resolution of complex issues, consolidation and capitalisation of the progress made.

Short term recovery needs (year 1) Preparatory and launch phase

The priority in the short term (year 1) is to establish appropriate policies and systems and to develop the capacities to coordinate and implement housing and community infrastructure at scale and in a timely manner, ensuring mobilisation and equitable deployment of resources. Unless the preparatory steps are taken to co-opt all partners, there is a risk of a fragmented approach, uneven distribution of assistance and unaccompanied reconstruction reinstating vulnerabilities. Early planning will ensure faster and better quality recovery:

- Complete humanitarian shelter assistance, ensure adequate coverage pre monsoon.
- Devise primary housing reconstruction policies, technical and financial assistance strategies, eligibility criteria, technical standards.
- Establish system for analysing emerging technical, economic and social trends, issues and challenges and to recommend policy and programme solutions as appropriate
- Establish institutional and administrative systems, (govt and non govt) for coordination, socio technical assistance, financial disbursement, monitoring and evaluation, quality assurance, at central and field levels.
- Increase and improve capacities; institutional, support staff, construction skills, material supply and quality, financial services, local access and distribution systems.
- Launch a mass communication campaign to disseminate policy and technical information.
- Monetise the local economy and accelerate reconstruction through provision of financial assistance.
- Carry out assessments and analysis to address land and risk related housing issues.

Medium term recovery needs (year 2-3) Full scale reconstruction

The medium term (year 2-3) will build on the foundation of the preparatory phase, ensuring maximum and sustained coverage of socio technical assistance, disbursement of financial assistance, and monitoring of recovery to address evolving challenges including quality assurance and supply chain bottlenecks. The initial focus on individual housing reconstruction will be complemented by supported rehabilitation and development of community infrastructure:

- Provide training to new and existing construction workers and professionals.
- Continue socio technical facilitation including on site advice, community mobilisation and outreach, demonstration models, buildings and events, development and provision of advice for hazard resistant and sustainable housing and settlements.
- Establish or upgrade sub district and VDC premises, staffing and services to facilitate housing and community infrastructure recovery.
- Implement community infrastructure rehabilitation and development programme, based on locally determined priorities.
- Ensure disbursement of financial assistance.
- Ensure supply and affordability of materials for reconstruction.
- Monitor quality and rate of reconstruction, carry out mid-course revisions to policies and programmes.
- Develop and operationalise solutions for land and risk cases.

Longer term completion and institutionalisation (year 4-5)

The longer term (year 4-5) will constitute the completion of housing reconstruction, housing services and relocation works, ensuring maximum safe compliance, including in remote areas and by vulnerable households. While this phase should ensure institutionalisation and further dissemination of improved housing practices, capacities and systems, sustainability should be anticipated from the outset and inform all policies and programmes throughout the recovery process:

1. Ensure completion of housing reconstruction, including household services (water and sanitation)
2. Ensure completion of community infrastructure works and associated operation and maintenance measures.
3. Ensure housing completion by vulnerable and disadvantaged households and communities through additional support measures as appropriate.
4. Continue support for land and risk issues, including resettlement, mitigation works
5. Institutionalise standards, training curricula, compliance mechanisms.

Key components of housing recovery

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The SAP projections will require clarification of policies relating to the eligibility and targeting within 11 of 14 priority affected districts and 17 less-affected districts for government and non-government assistance.

Financial assistance for housing recovery

Financial assistance to homeowners

The Government is committed to providing NPR 200,000 (roughly USD 2,000) in financial assistance to an estimated 625,000 eligible homeowners amounting to NPR 125,000 million. Funding will be disbursed in three tranches; NPR 50,000 mobilisation, on signing of participation agreement, NPR 80,000 on certification to plinth level, NPR 70,000 on certification to lintel level. Payment of the second and third instalments will be linked to compliance with disaster resistant standards mandated by NRA/MOUD. Disbursement of tranche payments will be made through household bank accounts. The cost of managing government financial assistance is accounted for under the technical assistance projection which accounts for staff in all concerned ministries responsible for activities in the earthquake housing programme.

Although the government will provide assistance to all eligible homeowners, it is expected that remaining resources required for reconstruction will be mobilised by households themselves.

The Nepal Rashtra Bank is considering providing an additional 300,000 NPR as a soft loan to interested households through a communal bond. In addition, the Government has decided to provide housing soft loans to interested households. The government-subsidised loan will not be available to eligible homeowners who receive the communal bond loan.

Supplementary top-up financial assistance for vulnerable households and designated remote and special status areas

The Government of Nepal recognises that many households are extremely vulnerable and would not be able to reconstruct their house if additional financial support is not provided. Households headed by single women, or elderly, or with members who are living with disabilities may face difficulties to contribute money or labour towards construction of their houses. Similarly, homeowners in very remote areas or heritage villages may find it very difficult to access materials and skills necessary for disaster resistant construction in a cost effective and affordable way. The National Reconstruction Authority (NRA) recognises the need for supplementary top-up assistance and is in the process of determining eligibility for top-up assistance on the basis of damage and eligibility survey results. While the government will provide the NPR 200,000 subsidy, it is expected that supplementary assistance of NPR 50,000 will be provided by partner organisations. Such assistance could take the form of an additional financial subsidy, provision of materials and labour support for those unable to rebuild on their own. Monitoring of the recovery progress will place specific emphasis on vulnerable groups and further identify households and areas experiencing challenges for consideration of mid-course supplementary strategies.

Repair and retrofitting support

In addition to the 625,000 rural completely destroyed or major damaged houses, over 180,000 houses have been assessed as having minor damage which may be repaired and retrofitted, including damage to roofs, gables and minor cracks. The prevalence of low strength and unreinforced masonry and poorly executed reinforced concrete frames also highlighted a need for retrofitting of vulnerable buildings (both damaged and undamaged) to mitigate future risks. Many families are concerned about occupying vulnerable buildings, remaining in temporary shelter and

seeking advice on appropriate safety measures. Repairs and retrofitting of partially damaged houses are essential to make them usable with adequate safety and avoid further deterioration of the building.

The NRA will coordinate the development of repair and retrofitting common solutions for common building defects, including analysis of the detailed damage assessment, and the preparation of standards, information and training on the same. Technical advice, according to local typologies, will be provided by government and partner organisations. Financial, material and labour assistance to vulnerable households for repair and retrofitting may be provided by partner organisations, within a framework determined by the NRA. The value of financial or material subsidy assistance should not exceed 30,000 NPR. Financial or material assistance must be accompanied by technical guidance.

Technical assistance for housing recovery

A technical support strategy for housing recovery will provide and apply appropriate standards and guidance for construction and ensure information reaches all communities and households in a timely, consistent and effective manner. Technical assistance is a strategic investment, adding value to and guiding the use of the estimated over NPR 250,000 million¹³, which will be spent in rural housing reconstruction and repair. The PDNA estimated NPR 14,000 m required for technical assistance over three years for rural and urban housing. The total number of houses to be reconstructed and repaired has increased from the PDNA estimation, technical assistance and inspection activities will need to continue for the five year duration of the programme, technical assistance capacity supporting housing will also contribute support to community infrastructure under the habitat recovery approach. The estimation is increased to account for the increased duration, scope of works and numbers. Technical assistance activities described in outline below are based on a projection of NPR 14,000m NPR for 5 years.¹⁴ A detailed technical assistance strategy including inspection and quality assurance, training, social mobilisation, communications and outreach strategy will be available shortly to guide the multiple stakeholders, optimise resources and ensure early implementation.

Quality assurance, inspection and certification

Quality assurance measures will be integrated in the technical assistance strategy, to promote compliance with standards of personnel, materials and construction/works, involving institutional and regulatory measures, technical advice and increased public awareness at various levels. Conditional financial assistance will contribute to leveraging compliance.

Suppliers will have primary responsibility for material quality. House owners and their masons will have primary responsibility for construction quality. The Ministry of Urban Development will operate monitoring and inspection systems for material quality at central and district level, and will manage the engineering teams responsible for stage site inspection of housing reconstruction. Inspection of infrastructure works will be managed by the Ministry of Federal Affairs and Local Development. Quality assurance of technical personnel will involve certification of technical professionals and construction workers, trainers and organisations.

Training and capacity building

Reconstruction and rehabilitation of over 815,000 houses and community infrastructure within a span of five years will require approximately 60,000 artisans. It is necessary that these artisans are

¹³ Estimated reconstruction cost including subsidy and privately mobilised funding.

¹⁴ Technical assistance financial projection based on 1) detailed district plans for inspection and socio technical assistance x 11 priority districts and 17 lesser affected districts 2) central activities including mass communication.

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aware of and skilled in disaster resistant construction techniques as per the technical norms, standards and guidelines promoted by the Government of Nepal. Homeowners, who will engage these artisans also need to be aware in order to demand incorporation of disaster resistant features in the building and ensure compliance with norms. This process will be facilitated and guided by Government and partner organisations. All the people involved in this process of reconstruction, particularly homeowners, artisans and facilitating teams need to be trained. Understanding these needs the NRA is planning a comprehensive training mechanism. The major training activities include:

Construction Training

Engineers'/Sub-engineers' training: Training will include building codes and regulations, quality assurance and site supervision, project management, training and communication, documentation, reporting and information management.

Orientation for house owners: The orientation will include awareness on administrative procedures of housing reconstruction, technical options available, mandatory compliance norms, facilitation and support available, estimating costs and planning reconstruction.

Training of petty contractors: Small-scale, local, informal contractors have nowadays becoming one of the key stakeholders in construction of private houses. Therefore, training of such local contractors should also be done. Such training will include basic knowledge and skills on disaster-resistant construction, construction management, financial management, safety etc.

Training for construction workers (masons and carpenters): Existing masons, carpenters and other construction workers, generally, do not have much knowledge and skills on disaster-resistant construction techniques. One key component of safer reconstruction is to train construction workers on the disaster-resistant construction technology. Such training includes basic knowledge and skills on safer construction techniques, approved standards and minimum requirements, quality of materials and process, and also on costing and site management services to homeowners and communities during reconstruction. Training of construction workers involve two streams:

- Skill upgrading of practicing construction workers
- Training unskilled and semi-skilled labour force to develop them as new masons, carpenters

Training for construction workers will be promoted within affected communities and districts, in areas of origin for migrant workers, through partner organisations and vocational training providers.

Training of trainers (engineers, sub-engineers and construction workers): A large number of trainers will be required to train artisans, home-owners, social mobilisers, and technical professionals. A robust trainer development process will be followed to develop required number of trainers alongside the training of end-users. Such process will include training on effective instruction, adult learning and other areas.

Facilitation and Mobilisation Training

Programme personnel and community representatives will be trained in social support approaches to facilitate housing and community recovery, based on common tools and curricula, on-the-job mentoring and support, using development good practices and locally specific knowledge. This will include:

Community mobilisation: social mobilisation, communication, participatory planning and implementation approaches, government policies and procedures.

Social inclusion and social protection: gender sensitive programming, vulnerability, exclusion, disability, grievance redressal, conflict resolution, negotiation, accountability.

Financial inclusion: household and community budgeting and financial management, savings groups, credit, cooperatives, collective procurement, financial services including banking.

Project management: basic management skills, quality assurance systems, assessment, documentation and reporting, information management.

In addition to the above training programmes, government staff at central, district and VDC level will be oriented on policies, standards, common programming approaches, monitoring and reporting mechanisms.

Communication and outreach

Communication and outreach is an essential component of the rural housing and community infrastructure reconstruction strategy. To be effective, communication and outreach should be timely, widespread, authorised and consistent. Communication and outreach efforts will focus on providing accessible information to affected households and communities on policies, reconstruction standards, materials and technical guidance, and on how to access financial and other available assistance.

The NRA Communication and Outreach Strategy will define methods, target audiences and sequencing. An initial large-scale mass communication effort is required to launch the Government recovery programme, inform people about financial assistance and eligibility criteria and promote awareness of build back better information in advance of reconstruction activities. Communication and outreach work plans and campaigns will be informed by programming priorities and respond to feedback on information needs from field monitoring, including frequently asked questions.

Mass communication activities: will be coordinated and managed by the NRA, including mass media and production of print materials for field dissemination

Field communication and outreach activities: will be defined under the scope of technical assistance activities including model houses, demonstration and local events.

Sustainable rural housing services

The housing reconstruction and rehabilitation programme across the affected districts provides an opportunity to promote not only hazard resistant technical guidance but also to regenerate and introduce environmentally sustainable housing and settlement knowledge and practices, improving living conditions and strengthening local resilience. This will involve the promotion of household and community water management, including rainwater collection, household sanitation, fuel use and energy conservation and natural resource management.

The NRA-led technical committee will coordinate with the Ministry of Urban Development, Ministry of Water and Sanitation, Ministry of Energy, Ministry of Environment and with technical and partner organisations to develop and disseminate appropriate technical guidance, information and training responding to diverse contexts, resources and priorities in affected communities. Sustainable housing and service measures should be incorporated into demonstration sites, model houses and outreach activities.

The promotion of sustainable housing and services measures should be based on a demand- led adoption approach, according to local choices and preferences. Government agencies and partner organisations may also develop and implement projects providing material or labour support to

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households or investing in community projects for promotion or implementation. The revival of local skills, use of local materials, enterprise by local organisations and businesses and measures to improve the lives of women will be prioritised for support.

Construction materials supply chain for housing

Reconstruction and rehabilitation will involve a massive increase in demand for construction materials and their transportation across the affected districts. The scaling up of capacity in production and distribution of materials is critical to facilitate timely and affordable reconstruction and to offset the risk of delays, inflation or poor quality construction due to lack of supplies or high costs. Supply chain support will include:

Supply chain strategy, stakeholder engagement and regulatory measures: The Government of Nepal will develop a national and local market-based supply chain development strategy, increasing and improving material availability and quality and strengthening local enterprise and employment. However, markets are likely to be biased to serve accessible areas, incentive strategies will be required to serve more remote areas. Local businesses and markets have been affected by last years' earthquakes and economic crises and still in the process of recovery. Central and district level authorities will liaise with national and local producers, vendors and transporters to review the construction economy, identify critical bottlenecks and requirements for policy and programme interventions. Regular market monitoring will also track material prices, availability and quality issues.

Improved distribution networks: Support strategies may address specific challenges for distribution networks. Investment in local trails, trail bridges, upgrading of roads and communication networks including mobile phone coverage will be considered critical to facilitating access for materials and the organisation of construction activities and prioritised in areas with high numbers of houses to be reconstructed. Rehabilitation of markets, development of storage capacity, support for collective procurement or transportation may be supported.

Improved production and fabrication: The Government will encourage local production and fabrication of construction materials. Brick, block, concrete and wood based small businesses may be supported to rehabilitate, upgrade or develop their premises, machinery, processing and staffing. Assistance strategies may include technical or enterprise training or advice, credit or grant assistance.

Temporary shelter support

Despite the well-coordinated humanitarian shelter effort which successfully reached over 650,000 households with assistance, shelter needs remain; 1) in pocket areas that did not receive cash or material assistance or where assistance was inadequate, 2) in remote or high altitude areas where climate conditions are particularly harsh, 3) for those who are displaced from home including in camps, without salvage of materials or household goods and expecting a longer path to permanent housing, and 4) for vulnerable households who were unable to carry out construction. .

The NRA in coordination with the Ministry of Home Affairs, Ministry of Urban Development and District authorities will assess the intermediate shelter situation, gaps, resources and options in consultation with humanitarian shelter agencies to determine strategies to address remaining needs including levels of assistance, eligibility and prioritisation. Emergency weatherproofing assistance will be provided before the 2016 monsoon season. Targeted partner organisation support for vulnerable households may continue in accordance with wider policies for vulnerability support,

taking due care not to formalise vulnerability through investment in temporary shelter delaying permanent reconstruction. Shelter support strategies will build on the lessons learned in the 2015/16 humanitarian shelter response, utilising cash subsidies, material support and/or labour support. The Ministry of Urban Development plans to construct community shelters supplementing temporary shelter capacity and as a longer-term shelter disaster preparedness measure.

Rehabilitating landless households

The PDNA estimated 22,256¹⁵ households will require land related solutions for housing reconstruction, including those who have completely lost their homes and land, for example due to earthquake related land sliding, and those whose homes are on sites at extremely high risk. In addition, many earthquake-affected households have tenure or status issues lacking evidence of land title that impact their access to financial and other assistance for housing reconstruction. The estimation of the number of households requiring land-related solutions will be informed by the CBS led housing survey, through the grievance redressal process in enrolment in the NRA led earthquake housing programme, and will require specialised assessments.

The NRA, in coordination with concerned government authorities, will develop an earthquake recovery land strategy to address land related policy and programme issues and to operationalise priority programme solutions. The strategy will seek to address the needs of those affected by the 2015 earthquakes pertaining to housing reconstruction, it will not address all long-term risk or settlement issues.

The Government of Nepal promotes in situ reconstruction wherever viable, and relocation only as a last resort and on a voluntary basis, recognising the importance of economic and social factors as well as physical safety for families and communities. The land strategy will include the following:

Institutional and technical support for land related issues, assessment, analysis and advisory services: The land strategy requires dedicated institutional capacities, coordinated by the NRA, drawing upon concerned authorities including the Ministries of Urban Development and of Federal Affairs and Local Development, the Departments of Mines and Geology and Land Reform, the Land Registration Office, Land Survey Office and Citizenship Office. Additional specialised expertise will be required to provide policy and technical advice and for programme implementation. Multi-disciplinary assessments of sites, socio-economic profiling and engagement with communities and households, analysis and resulting recommendations will inform detailed policies and planning for support interventions. The NRA will ensure the services of government agencies are provided to all affected households and will ensure information, advice and grievance redressal mechanisms are available throughout the duration of the programme with particular attention to the needs of vulnerable households.

Facilitated relocation/reclustering through cash subsidies: In line with the principles of supporting voluntary resettlement and enabling owner driven housing reconstruction, the priority strategy to support households who have lost their land, are categorised as displaced or have land status constraints will be through the provision of a land subsidy cash grant on supporting households to acquire a housing site of their choice.

This financial assistance for homestead land will amount to NPR 300,000. Households will then be further eligible for the NPR 200,000 housing reconstruction subsidy. The assistance for land will be

¹⁵ The SAP projection estimates 30,000 households including assistance to landless with status issues.

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administered as a single grant accompanied by technical support and services, ensuring the new site is assessed as safe and that land transactions are carried out efficiently and securely to the new owners. Disbursement of the housing subsidy will be contingent on confirmation of the acquisition of a safe housing site and will be managed through household bank accounts.

Community relocation through new site /village development: Where a community or group of eligible landless displaced households do not wish to avail of the individual land subsidy for self-resettlement, and wish to move as a community, the Government of Nepal will seek to support their relocation to a new community site. This will involve the development of state owned land or the acquisition of land to provide sites for housing construction and basic associated infrastructure. Relocated households will be eligible for postponed disbursement of the housing reconstruction subsidy and associated technical assistance.

The Ministry of Urban Development has undertaken a pilot so that appropriate planning guidelines for relocation can be developed in accordance with the integrated habitat approach within the overall owner driven policy framework. The identification of eligible locations and specification of mitigation activities will be carried out through the multi-disciplinary assessment process, considering physical, economic and social criteria for feasibility. The identification of new site options, negotiations with relocation communities, site development and housing reconstruction may be expected to involve a protracted period, and may take longer than the five years recovery programme timeframe.

Risk mitigation works in existing villages: The land strategy promotes in-situ recovery as a priority objective, including mitigation works where viable to avoid unnecessary relocation. The identification of eligible locations and specification of mitigation activities will be carried out through the multi-disciplinary assessment process, considering physical, economic and social criteria for feasibility and will require detailed design and implementation with due regard to multi hazard, maintenance and sustainability of all proposed measures. Mitigation activities must be carried out under the supervision of qualified professionals and certified by the concerned local authorities. Mitigation activities will include slope stabilisation measures, reforestation, retaining walls and removal or management of rock fall or sliding risks. Interventions may reduce risks to housing, settlements, roads, bridges and other critical infrastructure. Funding for mitigation activities will be allocated based on the detailed assessment and design of mitigation measures.

Community infrastructure rehabilitation

Post-earthquake recovery for rural communities involves not only physical reconstruction of individual houses but also the rehabilitation of collective assets, community infrastructure facilitating livelihoods, social places and practices, applying build back better principles to settlements to contribute to longer term resilience. The Government of Nepal promotes a community infrastructure recovery strategy that ensures investment in all affected communities, devolution of decision making for local prioritisation and execution. The community infrastructure strategy will provide guidance on funding terms and conditions, scope of works, methodologies and technical requirements, planning, implementation, monitoring, reporting and evaluation, at central and district level. The strategy will guide government and non-government agencies and funding, including basic levels of funding for all affected districts and rationale for supplementary assistance in target areas. Diagnosis of needs and investment in works that facilitate access will be initiated in the earliest phase, while general community rehabilitation will take place over the medium term in accordance with local priorities. The community infrastructure strategy will include the following:

Planning, mobilisation, technical assistance: Planning, coordination and technical assistance for community infrastructure will involve institutional arrangements at central and district levels. Curricula, training and support for community planning will be developed in consultation with government and non-government agency personnel in the initial capacity building phase. The community infrastructure strategy will promote participatory planning approaches to facilitate local assessments of needs, diagnosis of options and development of proposals. Programme support will include standardised specifications for common works and specialised technical advisory services project management training for community contracting, operation and maintenance to ensure maximum local participation in implementation and local economic benefit.

Trails, trail bridges rehabilitation and local access: Local trails and access are critical for the increased movement of people and materials required for reconstruction, particularly in areas that experienced heavy destruction. Trails and trail bridges require rehabilitation following the damage of the 2015 earthquakes. Additional works may be needed to ensure trails are fit for purpose, considering risks of weather or sliding damage and deterioration.

The selection and prioritisation of trail rehabilitation and development projects should take account of local needs for during reconstruction, including levels of damage, levels of population, travel distances and socio economic vulnerability. All infrastructure works should be designed and executed with due attention to hazard resistance requirements and viable maintenance plans. Local access investment may also constitute initiatives such as collective procurement, advance storage or depots, trailers, loaders or pack animal transportation to facilitate the increased need for transporting construction materials.

Community livelihood and enterprise: Community livelihood support may include the rehabilitation of livelihood premises or assets, community rehabilitation through cash for work, or financial, material or labour support for livelihood related reconstruction or development. Community livelihood assistance will be targeted to areas determined as priority under the community infrastructure strategy criteria, including heavy damage and areas of complex disadvantage, and targeted to support vulnerable groups within other areas. Community livelihood rehabilitation will include the reconstruction of structures for agricultural use, reconstruction of local markets and small businesses, in order to restore, secure and sustain livelihoods impacted by the earthquake. Community livelihood restoration and enterprise development may include building repair or reconstruction, replacement of stock or equipment or other measures.

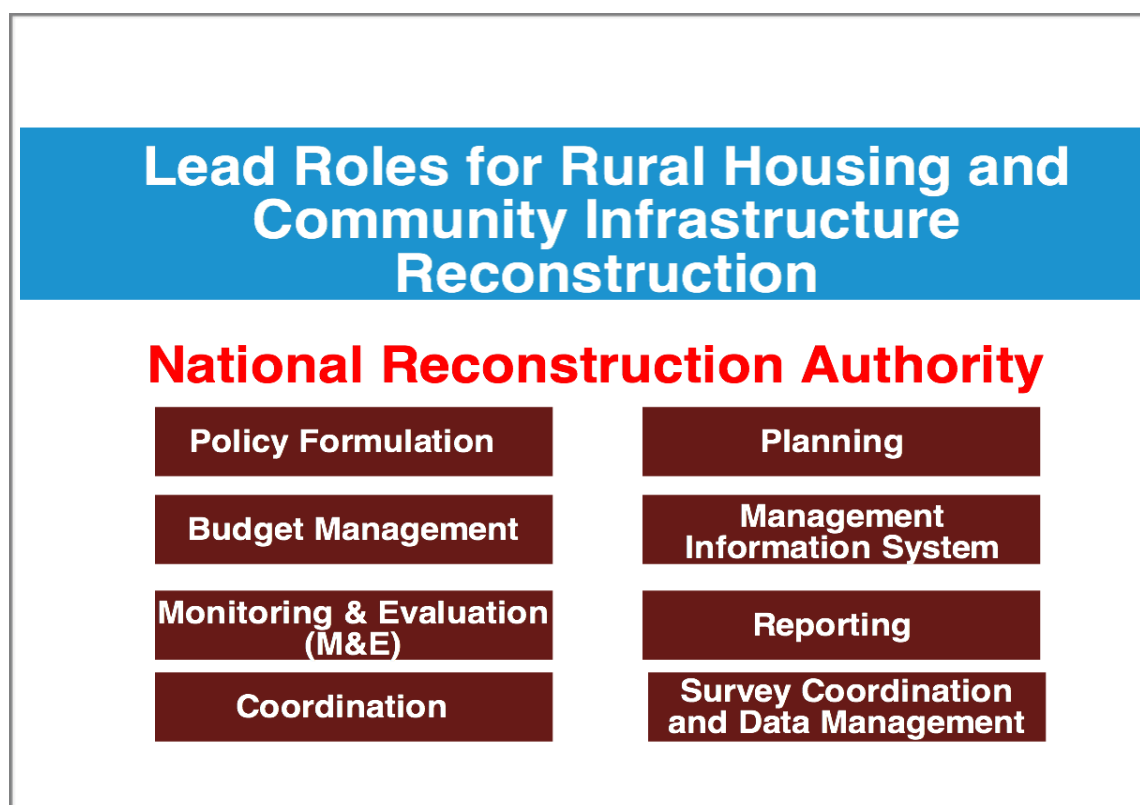
Community infrastructure rehabilitation and development, block grants and community contracts: Community infrastructure reconstruction and rehabilitation will be implemented mainly through community user groups and partner organisations. Overall planning, technical assistance, supervision, monitoring and inspection will be done by MoFALD. The majority of support for community infrastructure will be channelled through block grant assistance to communities for interventions defined through participatory community planning processes. The proposed funding will be based on a funding range determined through central and district level planning. Rehabilitation of stairs, retaining walls, small bridges, channels, water supply, water storage, drainage, small community buildings, temples and public spaces may be carried out through community infrastructure funding. Other works may include site works, slope stabilisation or natural resource management constituting environmental rehabilitation or risk reduction. Planning may be facilitated with technical guidance as required and must include hazard resistance, maintenance and sustainability criteria. Implementation will be primarily through local labour including community contracts according to feasibility. Communities will be provided with training and support for local implementation.

6. Implementation strategy and risk analysis

Institutional Arrangements

The respective roles and responsibilities of central, district and VDC authorities have been defined through policies articulated by the National Reconstruction Authority, the operationalisation of the institutional arrangements will require extensive mobilisation and training of staff, rehabilitation or establishment of premises and equipment, inter-agency cooperation and communication and the detailed development of institutional procedures and systems to coordinate and manage housing and community infrastructure recovery activities. The role of the NRA role is coordination, policy formulation, budgetary planning and resource management, and monitoring, while the key implementation will be carried out by MoFALD, MoUD and partner organisations.

Lead Roles for rural housing, community infrastructure and land recovery



Technical Committee

A central level inter-departmental technical committee has been instituted by the NRA and empowered to expedite confirmation of technical guidelines and standards for reconstruction and rehabilitation. The technical committee will continuously provide technical advice, validate key

training curricula, inspection methodologies, and other programme tools, and provide the reference for communication materials and outreach activities. It should monitor progress and quality through periodic review and propose remedial actions where required. The technical committee will also commission research, assessments and advice as required.

Central level offices

Central level programme development and coordination is led by the National Reconstruction Authority, ensuring integration between respective elements of housing, land and community infrastructure recovery activities by government and non-governmental stakeholders. Two Central Level Programme Implementation Units (CL-PIUs) are established in MoFALD and MoUD. The CL-PIUs coordinate with the NRA, concerned ministries and departments, and partner organisations for planning, reporting, monitoring, and implementation of reconstruction activities with central and common information management. The CL-PIU in MoFALD is responsible for

	MOFALD	MOUD	Partner Organisations
HOUSING	Housing Subsidy Management Grievance Management Environment and Social Safeguards Management	Housing Standards Inspection Technical Assistance Contract Management of POSs	Technical Assistance Vulnerable Top-up Subsidy
COMMUNITY INFRASTRUCTURE	Standards Coordination Inspection Implementation Contract Management of POs		Subsidy Technical Assistance Implementation
LAND	Land Subsidy Management	Technical assistance Coordination for site risk assessment New site development	Subsidy Technical Assistance

government housing financial assistance distribution, grievance handling, social mobilisation, communication with local authorities and environmental and social safeguards. The CL-PIU in MoUD is responsible for promotion of and compliance with standards through building inspection and co-ordination with partner organisations for implementation of technical assistance including training.

District Level Offices

The committee, which is led by the Members of Parliament from the district and with CDO and LDO as members, will coordinate reconstruction, monitor the progress of reconstruction in the

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district and provide advice to related implementation units. A District Level Project Implementation Unit (DL-PIU) for rural housing will be established within the MoUD DUDBC District Division Office to coordinate partner organisations and Local Resource Centres (LRCs) for technical assistance implementation, monitoring and inspection of reconstruction of rural housing. Similarly, a separate District Level Project Implementation Unit (DL-PIU) for community infrastructure will be established within the District Technical Office to coordinate partner organisations and community groups and oversee implementation, monitoring and inspection of reconstruction of community infrastructure.

District level offices will ensure communication to VDCs of central level policy and programme updates, and communication from VDCs to central level on recovery progress and issues requiring policy or programme measures.

Local Resource Centres

Local Resource Centres (LRCs) will be established in an accessible place covering three to six VDCs. Communities may access some of all of the following services or facilities from a LRC: technical human resources necessary for supervising and inspecting housing and community infrastructure, masons and technician training, information on trained masons and technicians, social mobilisation support, technical information and assistance for reconstruction, banking services, construction materials and grievance redress system.

VDC Level Offices

At least one engineer and/or one sub-engineer will be appointed in every VDC for approval of designs, inspection of phase-wise construction, to provide technical advice and also to inspect community infrastructure reconstruction. A social mobiliser will be appointed to inform people about safe and sustainable practices for housing and community infrastructure rehabilitation, increase public awareness and redress the grievances at the local level. At least one skilled mason will also be appointed to provide practical guidance to local masons and households for reconstruction and to support training and demonstration activities. The VDC housing and community infrastructure team will be mobile support, travelling to all affected villages to support activities,

Community Committee for Reconstruction

VDC level/habitation level Community Committee for Reconstruction (CCR) is the key community level set-up to provide a platform for the community to engage in reconstruction and liaise with LRC and VDC personnel. This committee can consist of representatives of affected house owners, community leaders and women leaders. The CCR will support administrative and assistance processes in the village. It will represent the community interests and views and ensure compliance with disaster resistant construction norms. The CCR will provide community support to the vulnerable and poor house owners and support conflict resolution and grievance redress.

Partner Organisations

Partner Organisations will provide support capacity and resources at central, district, local resource centre and field levels, according to their expertise and programmes. They may be specialised in topics like technical training or may implement area based multi sectoral recovery activities. Partner Organisations must adhere to the relevant Government of Nepal policies and standards and work in close coordination with local authorities for continued development and implementation of programmes and monitoring of recovery progress and needs in the rapidly changing post disaster context. The priority roles for partner organisations include the provision of technical assistance and outreach, social mobilisation and inclusion, targeted support for vulnerable individuals and groups, monitoring and reporting of progress, challenges and solutions.

Cross cutting issues

Cross cutting issues will be integrated into housing, community infrastructure and land policies and strategies as follows:

Gender and social inclusion: The prevalence of women-headed and elderly-headed households will result in particular challenges to manage housing construction. The status of particular groups may constrain their participation in community activities or access to community investments. Inclusion strategies to address the different needs, capacities, roles and priorities of women, elderly, disabled, tenants and minority groups will be developed in consultation with respective stakeholder groups. Inclusion strategies will address barriers to eligibility for and access to assistance, promote processes for representation, participation in decision-making and implementation, supplementary targeted assistance terms and conditions and mechanisms for disaggregated monitoring and evaluation and accessible advisory and grievance redressal services. Government and non-government personnel will be trained on inclusion sensitive programme design, implementation and monitoring.

Environmental considerations: as reconstruction of rural housing proceeds, with a high demand for building materials, building debris disposal, and in some cases new settlement sites, there is a high risk of adverse environmental impact. Such impact can put people at risk of future disasters (e.g., landslides and floods) or increase conflict over scarce resources. In order to build back better and safer it is important to apply environmentally responsible practices that increase the lifespan of buildings, minimise pressure on the environment and create better living conditions for people including household water, sanitation and energy. Extracted and harvested building materials should be from sustainable sources. Transportation should be minimised. Environmentally sustainable habitat recovery will be based on participatory community planning, infrastructure, risk reduction and natural resource management measures.

Disaster Risk Management: The post-earthquake recovery provides a unique opportunity to integrate disaster risk management into recovery and to contribute to the longer-term resilience of the affected districts and to national resilience efforts. Disaster risk management can be integrated into the recovery strategy for the rural housing and community infrastructure through the development and institutionalisation of research, codes, standards, curricula and public information, the development of human resources, knowledge and skills to implement safer reconstruction and continued improved construction practices, and large scale communication and community engagement initiatives to increase public awareness and sustain interest in safer practices. Disaster risk management must be multi hazard, consider habitat or settlement issues as well as construction concerns and implicate all stakeholders; government, technical professionals and communities with inter related roles and responsibilities.

Quality Assurance, Monitoring, Evaluation and Accountability

Quality assurance

The PDNA report identified a need for monitoring and quality assurance during reconstruction. The proposed mechanisms will be implemented by the MOUD and the MOFALD with dedicated staff, equipment and systems for reconstruction. Regulatory mechanisms will be accompanied by technical assistance initiatives to train and advise producers and suppliers, as well as to promote quality awareness among construction workers and communities.

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Materials: Government regulatory mechanisms will be developed to assure quality in 1) imported materials, such as steel and cement, in 2) locally extracted materials, in 3) locally fabricated materials and elements and in 4) the harvesting, treatment and processing of timber and other renewable materials. Technical specifications will be disseminated and laboratory testing and site inspections will be carried out by designated authorities to assess adherence to standards.

Inspection of construction :Ministry of Urban Development officials will carry out stage inspection of all new houses reconstructed under the earthquake housing programme, to certify compliance and approve tranche disbursement. Ministry of Federal Affairs and Local Development will approve, inspect and certify community infrastructure works where required.

Reporting, monitoring and evaluation

The reconstruction timeline is approximately five years, progress will be continuously monitored and policies and programmes will be revised accordingly.

Reporting activities: A robust management and information system (MIS) has been developed for the 31 affected districts to document and track housing survey results, damage type, homeowner eligibility and the flow of subsidy funds. The MIS is designed to enable disaggregation by gender and identified vulnerable populations and marginalised groups. The MIS will be expanded to incorporate reconstruction monitoring and reporting by government and partner organisations for financial and technical assistance: stage completion and compliance, building type, number of construction workers trained, distribution of outreach materials. Market monitoring will track prices, availability, quality of materials and skills. Geo referenced data reported on the basis of common criteria and intervals will be tracked at both district and central level to monitor progress. Coverage, gaps, levels and quality of government and non-government assistance across all concerned districts will be tracked.

Periodic evaluation: The NRA will coordinate periodic evaluation of recovery topics and of government and non-government activities, including adherence to policies and standards, effectiveness, social inclusion and community satisfaction feedback.

Baselines, results and impacts: The framework recommends monitoring results and impacts as well as inputs. particularly the rate and quality of reconstruction, recognising that multiple activities such as training, information, financial assistance and availability of materials contribute to meeting more than one objective. A baseline for knowledge, attitudes, skills and practices will be developed as early as possible to inform programming and to enable monitoring of the impact of training, communication and other promotion activities.

Longitudinal monitoring: Results and impacts of policies, strategies and programmes and recovery progress will be monitored for five years after the lifespan of the framework to understand longer change processes, including the sustainability of improvement measures.

Independent Third Party Audit

The NRA will plan an independent third party audit through reputed professional technical agencies to audit the progress and quality in each district annually until completion. This independent audit may provide policy, technical or institutional recommendations to support national and local level implementation of the reconstruction program.

Grievance Redressal Mechanisms

The National Reconstruction Authority has overall responsibility for grievance redressal in all

earthquake recovery programmes, supporting grievance mechanisms established by concerned line ministries. Grievance issues will be addressed through proactive communication, accessible advice and dedicated grievance redressal systems at district and central level.

Risks and mitigation strategies

Risk	<i>Fragmented, uneven and delayed recovery, absence of leadership and capacity</i>
Strategy	Dedicated reconstruction agency, clear institutional roles and coordination bodies Timely decision making and broadly owned policies and programmes Government capacity strengthening for management and implementation. Effective engagement with development actors, harnessing available resources. Coordination to ensure equitable coverage of technical and financial assistance.
Risk	<i>Reconstruction is unaffordable and slow. Material and labour supplies inadequate.</i>
Strategy	Appropriate, accessible and feasible standards approved for reconstruction. Material supply chain strengthening, transport and market rehabilitation, production increased and improved. Construction worker training to increase number and skills. Financial support to offset costs, remonetize the economy. Strengthen livelihoods and local economy in recovery. Temporary shelter already well covered for 650,000 households for approx. 3 years.
Risk	<i>Rebuilding the same vulnerability, poor quality</i>
Strategy	Locally known materials and technologies used in reconstruction Mass communication and large scale training as early as possible and sustained through reconstruction, increasing awareness and skills. Conditional assistance to leverage compliance with standards Inspection of material quality. Inspection of construction standards.
Risk	<i>Many people will be excluded from assistance, or will struggle to reconstruct.</i>
Strategy	Uniform policy for basic assistance to all eligible households Supplementary measures to assist vulnerable and disadvantaged Communication on assistance available, wide scale mobilization and equitable coverage of partners Increased access to financial services Common grievance redressal system.
Risk	<i>Recovery resources will be subject to corruption</i>

Strategy	Comprehensive and transparent damage and eligibility assessment. Financial assistance directly to household bank accounts. Robust centralized management and information system Community accountability for community infrastructure rehabilitation
Risk	<i>Large scale and unsuccessful relocation process</i>
Strategy	Assessment to maximize potential recovery in situ Site mitigation rather than relocation where feasible Enabling self-relocation in existing villages according to household choice.
Risk	<i>Recovery improvements are not sustainable</i>
Strategy	Recovery implemented by households, communities and local authorities themselves developing knowledge, skills and experience. Institutionalise and disseminate standards, curricula, information Minimise new relocation site development. Operation and maintenance plans for all community infrastructure
Risk	<i>New disaster in Nepal</i>
	Systems, policies, activities already established. Funding positive. Strategy ensures multiple stakeholders and decentralized implementation, can accommodate flexibility and adjustment if mid-course corrections required.

7. Financial requirements and planning

Shelter: The Nepal Flash Appeal estimated almost NPR 10,000 million required for emergency shelter and non-food items. The subsequent PDNA estimated a further approximately NPR 15,000 million needed for temporary shelter along with NPR 6,000 million for demolition and debris removal (mainly in urban areas). The shelter sector response was well supported with an estimated NPR 20,000 million provided in cash, non-food items, shelter material and labour support through government and humanitarian agencies, private and community support. Remaining shelter needs are predominantly in formal and informal camps, individual households or pocket areas and communities. The SAP projects NPR 3,000 million humanitarian assistance is required to supplement the affected populations' resources and efforts to construct their own shelter, targeting particularly vulnerable households, upgrading of inadequate camps that are still needed and provision of temporary shelter.

Housing: An estimated NPR 158,720 million will be required for rural housing reconstruction and recovery works, of which the Government of Nepal has committed to contribute NPR 125,000 million through financial assistance for 625,000 houses. An additional NPR 15,000 million is recommended to provide top-up or supplementary assistance to vulnerable population such as the displaced, elderly, disabled, female or child-headed households and people in remote and designated areas and NPR 5.400 million to contribute to repair works. NPR 14,000 million is projected as required for management, quality assurance, technical assistance and communications to guide and optimise the 250,000 public and private investment in reconstruction and establish long term systems and improvements. Approximately NPR 48,000 million will be required to finance housing credit assuming 60% uptake of NPR 300,000 loans and 20% uptake of NPR 1,500,000 loans.

As of April 2016, the Government of Nepal has bilateral and multilateral grants and loans worth around NPR 45,000 million for housing grants, and about NPR 5,000 million for quality assurance, technical assistance and programme management. The majority of technical assistance funding will be mobilised from development partners. Assessments of resources available (September 2015) indicated approximately NPR 10,000 million available, but uneven distributed. This funding has not yet been accounted for in the worksheets as it requires further reporting and updating. A technical assistance strategy is needed to guide levels of funding and details of activities to ensure the optimisation of resources available, greater coverage and predictability. Planning for supplementary assistance as part of the finance planning and vulnerability planning is also needed to confirm allocation of funding.

Community Infrastructure: The housing sector financial planning is based on an already established uniform approach, the development of community infrastructure financial planning is based on a range of activities and seeks to introduce a more uniform approach. The current funding committed is less than NPR 2,000 million, but the Government of Nepal promotes the importance of rural community recovery and the opportunities for economic and social recovery through community infrastructure rehabilitation, complementing the investment in housing reconstruction. The financial projection is NPR 48,960 million required, representing approximately one quarter of the investment in housing.

Existing and planned funded and unfunded projects have been categorised under 1) community access, 2) community livelihoods and 3) community infrastructure establishing a strategy and basis for projections ensuring greater consistency and coverage, to be further detailed at district level.

The strategy allows flexibility according to the funds available and advocates for greater consistency and coverage, to be detailed further at district level. This approach was taken to mobilise governmental and non-governmental resources and to guide the levels of funding planned by development partners.

Investment in some elements such as trails and access should be prioritised early to facilitate reconstruction, but other rehabilitation investments may be implemented later to avoid inflationary impacts during peak housing reconstruction phases. The early establishment of dedicated institutional capacity to plan and manage community infrastructure is a priority investment.

Land: The PDNA estimated NPR 10,525 million required for relocation, The SAP projections for land related rehabilitation estimate NPR 22.380 million required and advocate initial investment in assessments to better determine the scope of needs and feasibility. Technical assistance will need to be sustained throughout the duration of the programme. The priority strategy is facilitating self-relocation through household subsidies for land, projected for 20,000 displaced households at a cost of NPR 6.000 million.

More comprehensive relocation and risk reduction initiatives will need to be subject to extensive feasibility analysis as the cost is likely to be considerable per household. Funding for site development relocation is not expected to be disbursed until the medium to longer term as the relocation process may require several years.

Rural Housing

TABLE: FINANCIAL REQUIREMENTS FOR PRIORITY RECOVERY PROGRAMME

	Year	2016	2017	2018	2019	2020	Total	On-budget sources	Off-budget sources	Unknown
	Budget in Million NPR	73,340	77,460	68,430	39,245	27,585	286,060	134,800	1,608	149,652
Program										
Rural housing reconstruction program - housing subsidy		35,000	40,000	35,000	10,000	5,000	125,000	125,000		0
Rural housing reconstruction program - technical assistance		4,000	3,000	3,000	3,000	1,000	14,000	4,000		10,000
Rural housing reconstruction program - vulnerable top-up subsidy		6,000	2,000	1,000	500	500	10,000			10,000
Rural housing repair and retrofitting subsidy		4,000	1,400				5,400			5,400
Designated area subsidy		1,500	1,500	1,500	500		5,000			5,000
Rural housing services promotion, eg: rainwater mgt, sanitation, energy		300	300	300	300	240	1,440			1,440
Shelter, monsoon, seasonal support, temporary and community shelter		2,500	500				3,000	500		2,500
Housing supply chain and distribution		840	840	500	400	300	2,880			2,880
Financing housing credit		8,000	10,000	10,000	10,000	10,000	48,000			48,000
VDC planning, community planning, mobilisation , technical assistance, advice,		300	300	300	300	240	1,440			1,440
Trail and trail bridge rehabilitation, local access		2,000	2,000	760	500	500	5,760	300	99	5,361
Community livelihood rehabilitation and enterprise, inc small business, markets, animal sheds, food storage, cash for work		1,500	1,500	1,000	1,000	760	5,760		1,509	4,251
Community infrastructure rehabilitation, inc local water supply, block grants / community contracts /direct contracts		4,000	8,000	10,000	8,000	6,000	36,000			36,000
Technical support for land and risk issues		250	250	250	125	125	1,000			1,000

Geodetic survey and risk assessment	1,000	500	500			2,000		2,000
Displaced households support for acquiring sites through subsidy	1,000	3,000	1,000	1,000		6,000		6,000
Community relocation, site and infrastructure development	500	1,500	1,500	2,000	1,500	7,000	5,000	2,000
Settlement mitigation works	400	620	820	620	420	2,880		2,800
Integrated settlement and settlement development	250	250	1,000	1,000	1,000	3,500		3,500

Sector Action Plan (SAP)

URBAN HOUSING AND SETTLEMENTS

Post-Disaster Recovery Framework, 2073



May 2016

URBAN HOUSING AND SETTLEMENTS

1. Situation Analysis

The 2015 earthquake caused extensive damage and loss in urban areas, especially the 52 traditional settlements in the Kathmandu Valley and a number of market towns, several of them also with significant historic value. There are altogether 89 municipalities, 12 small towns/market centres and one district headquarters, which is not classified as a municipality, in the 31 earthquake-affected districts. Although there are settlements with urban characteristics beyond municipalities, and entire areas within municipalities do not necessarily bear an urban character, for the purpose of this report, settlements which have been designated as municipalities will be considered as urban settlements.

Table 1: Urban settlements in earthquake affected area

Hierarchy of settlement	Number of urban settlements in:			
	14 severely hit districts	11 crisis-hit districts	Remaining 6 districts	Total
Municipalities	42	31	16	89
District headquarters yet to become municipality	1	0	0	1
Small town/ market centres	7	4	0	11
Total	50	35	16	101

Impact in urban areas is always complex: for instance, the urban poor most often rented accommodation in already dilapidating historic structures, which are now lost or unsafe, so the rental market shrunk and informal settling increased. The first rebuilding in historic urban areas has started, without planning and without regard for heritage and open areas are shrinking, due to sheltering and informal settling, reducing future evacuation capacity. Uncertainties are many: the revival of market towns; rebuilding in high-density, partially-damaged urban neighbourhoods; and the possibly prolonged shortage of skilled labour, since many will be drawn to the rebuilding of public buildings in all 14 districts.

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Because of its complexities, recovery in cities often takes longer and requires an integrated, tailored response which considers technical, social, financial and institutional perspectives. Experience shows that ignoring the urban dimension now could have a larger negative impact on urbanisation in the long term, as migration and development patterns can change, with, for instance, possibly increased informality and transformations in the urban economy, which represents a growing share of the GDP.

2. Strategic Vision for the Sector

In the next five years, urban housing and settlements affected by the earthquake will be restored, rebuilt and revitalised, so as to create safe, well-planned and prosperous cities, in line with the five guiding principles of the National Urban Development Strategy, 2015. The exposed vulnerabilities in cities will be addressed by implementation of improved building codes, land use planning and construction practices. This requires a specifically urban programme which combines planning and rebuilding measures within the strategy for recovery and reconstruction and that includes:

- Supporting people rendered homeless by the earthquake to restore their housing, with special attention to the needs of the urban poor and renters.
- Restoring urban heritage settlements, unsafe neighbourhoods and affected market towns, by improving access to planning and building skills and by supporting and maximising local initiatives.
- Engaging communities, small and medium-sized businesses and cooperatives to increase investments in the revival of historic settlements and market towns.
- Strengthening the capacity and effectiveness of municipalities and other stakeholders to plan and enforce safe and resilient rebuilding and expansion of settlements.
- Monitoring and protecting the urban poor who became homeless or will be at risk thereof during recovery and reconstruction, in collaboration with social and cultural stakeholder networks.
- Strengthening urban resilience, by developing policy frameworks and implementation strategies for comprehensive risk reduction and enforcing the safeguarding of public and open spaces for evacuation.

Within NRA, an integrated urban approach is facilitated by the combination of urban and heritage issues in a single division. This will ease collaboration with essential line ministries, the Kathmandu Valley Development Authority (KVDA), municipalities, reconstruction committees, financing institutions, NGOs, community based organisations and private sector.

3. Current status of ongoing recovery efforts

The PDNA recorded damage to 138,093 (23% of total) housing units in the 3 urban districts of Kathmandu Valley. The NRA is preparing to start detail assessment of damaged houses in these districts. Similarly, the Housing and Recovery Platform is undertaking an urban assessment. In the meantime, only a few interventions have started in the urban sector to kick start recovery efforts.

On 16 January 2016, on the occasion of National Earthquake Safety Day, the Rt. Honorable Prime Minister launched the National Reconstruction Campaign from Bungamati, a traditional Newar settlement in Lalitpur, where plans are being prepared for its reconstruction and revitalization. Similarly, local communities in several other towns have also started preparing plans for reconstruction and some NGOs, such as Lumanti, are assisting community-led planning processes for reconstruction of traditional settlements such as Thecho in Lalitpur and Machhegaun in Kathmandu. Besides efforts from government and development partners, individual homeowners and local communities have also put a lot of effort in demolition of damaged houses, removal of debris, repair and reconstruction.

4. Expected sector results and indicators

The main results to be achieved at the end of five years are as follows:

- Reconstruction of urban housing units
- Revitalisation of heritage settlements and market towns
- Development of safe and resilient settlements with adequate public spaces
- Enhanced capacity to plan and develop resilient cities
- Adequate policies, plans and standards to guide safe and sustainable urban development

5. Priority Recovery Programmes

The areas of intervention required in the urban housing and settlements sector are:

- Filling the information gap on physical and socio-economic impacts of the earthquake in urban areas
- Formulation and revision of an appropriate policy framework for urban housing and settlements to accommodate the post disaster recovery needs. This should build upon the existing National Urban Policy, National Shelter Policy, National Urban Development Strategy and National Building Codes.
- Technical guidance for reconstruction, retrofitting, repair and maintenance of urban housing units, through the provision of appropriate options for earthquake-resistant yet affordable building designs and construction technologies that reflect cultural, social and livelihood needs of people and communities, while providing for increase in family sizes and changing needs.
- Support for the reconstruction, revitalisation and regeneration of urban historic settlements where heritage issues are addressed properly, with due attention to original settlement patterns and an integrated approach in design and implementation needs to be assured for basic services including water and sanitation, health as well as provision of livelihoods.
- Support to the restoration of rental housing, addressing recovery of rental loss and adequate housing solutions for renters.
- Upgrading or relocation of informal settlements in a participatory manner to safer sites, while addressing livelihood concerns, social networking opportunities and adequate, safe and affordable basic utility services.
- Demolition and debris clearance is an essential pre-requisite for commencing reconstruction, and communities as well as settlements must be supported for demolition and debris clearance.
- Training of technicians, artisans, house owners and service providers.
- Construction materials supply chain management and labour requirements, particularly the use of locally available, cost-effective, environmentally-friendly and good quality materials should be used. Use of salvaged materials should be taken into consideration.
- Urban land management, including access to land, land tenure, Guthi land management and land titles of apartment buildings need to be addressed.

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- Municipal by-laws and planning norms for different hierarchies of urban areas need proper adoption of disaster-resilient features and mandatory incorporation of National Building Code requirements in the building permit process.
- Risk-sensitive land-use planning in municipalities and urban centres; communities need to be involved in risk mapping.
- Considerations of disaster resilience for high-rise buildings: High-rise Building Norms and standards need to be enforced.

The following criteria were used to prioritise recovery programmes in the urban sector:

- Prioritise historic and economically essential settlements, not urban planning and property broadly.
- Prioritise actions where NRA has a clear mandate for monitoring or intervention, as opposed to the many other urban stakeholders.
- Prioritise a combination of planning/coordination and rebuilding/repair activities

The following two programmes, each with two sub-programmes, have been prioritised for urban recovery. These programmes will be rolled out over a five-year period.

A1 –Restore urban housing and settlements

A1.1 –Integrated recovery and reconstruction of historic settlements

NRA wishes to apply area-based definitions and complete the census survey of affected households at the earliest for the priority urban areas, such as Bungamati and similar high-importance settlements. Once the list of affected households is finalised, NRA will prioritise the grant issuance of NPR 200,000 to the affected households, and prioritise arrangements for the provision of community-backed household loans (NPR 300,000) and/or mortgage-backed loans (NPR 2.5 m). A priority programme will be implemented with the participation of all relevant stakeholders, to ensure the completion of the census survey in all affected urban areas and initiation of recovery efforts with active participation of affected communities in the planning and implementation of reconstruction and recovery activities, particularly in the restoration of traditional settlements. This programme will build on prior and current community-based engagement, e.g. area planning, small and medium enterprise (SME) development for green construction, and tourism promotion. Specific solutions and technical assistance packages will be developed for the conservation of houses with a heritage value, for repair and retrofitting partially damaged houses, for reconstruction of fully damaged houses, by taking into account the heritage value of historic settlements.

A1.2 –Urban area planning and recovery support, particularly for market towns

A priority programme will be developed to support early area-based recovery planning in the economically important market towns, in support of the rebuilding of urban housing and critical market town infrastructure. Where heritage is an added component, this issue needs to be addressed as well. Market towns and district headquarters will play a vital role in supporting rural recovery and reconstruction. The early rehabilitation of administration is essential for coordination and management of reconstruction. Rehabilitation and expansion of markets, financial services, communications, vendors producers and distribution networks for construction materials are essential to support urban recovery of affected towns and recovery in their rural catchment areas.

Strategies for market town recovery will be developed under NRA by MOUD, MOFALD and district stakeholders.

A2. Enhance urban resilience

A2.1. Enhance partnerships for the mainstreaming of DRR and improved urban resilience

This is an array of soft initiatives and collaborations with NRA support, working with local and national institutions and a variety of non-governmental actors, including the private sector, on resilience. It includes training, capacity-building, and citizens' awareness about urban regulations.

The urban housing and settlement recovery framework provides an opportunity for mobilisation of business, community, diaspora and philanthropist stakeholders and resources, wider than the government and development partner stakeholders to plan and implement recovery activities. Strategies will include area based mobilisation and thematic based mobilisation, such as material producers. The a strategy should guide investment by establishing institutional protocols, identifying investment projects and devising mechanisms for community and business grants.

A.2.2. Mobilise high-density urban areas in Kathmandu Valley towards improved safe and accessible public spaces

A community-based programme will be launched to advocate and demonstrate how to improve and safeguard open spaces, for safe and resilient neighbourhoods and in order to upgrade the evacuation and logistics capacity in case of disasters. This is also in response to the encroachment of public and open spaces throughout the valley as a result of the decreased rental housing and cheap commercial floor space capacity, because of damage and loss of buildings.

6. Implementation strategy and risk analysis

A large number organisations ranging from central government, municipalities, community-based organisations, private sector, financing institutions and national/international partner organisations will be engaged in urban recovery efforts. Some of the key stakeholders and their roles are presented in Table 2 below.

Table 2: Roles of various stakeholders

Organization	Roles and Responsibilities
National Reconstruction Authority	Overall responsibility for recovery and reconstruction at national level
National Planning Commission	Incorporate PDRF requirements into upcoming national periodic plans
Ministry of Urban Development (MoUD)	Key technical agency responsible for overall policy guidelines and executive agency for housing and urban development sector
Ministry of Federal Affairs and Local Development (MoFALD)	Policy guidelines and coordination support for overall local development including urban and rural development sector

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Department of Urban Development and Building Construction	Key technical agency responsible for implementation of housing and urban development sector plans and programs.
Town Development Fund	A national agency responsible for providing financing support to municipalities in implementation of urban infrastructure development programs. The TDF mechanism may be used to channelize financial support for housing reconstruction and regeneration of urban settlements.
Municipalities	Key actors for local governance and implementation of local plans and programmes. Housing reconstruction support grant of NRs. 200,000 will be disbursed through these agencies
Municipal and ward level reconstruction committees	Engage communities in planning and implementation of reconstruction programmes, resolving of disputes related to land management and other issues and monitoring and evaluation of all activities. These committees could be enabled to operate Information Centres and provide linkage to community with municipality and NRA for participation in planning and follow up on grievance redressal. Community participation may be further ensured by setting up “Nagrik Sahyog Kendra” – a community cell – in each Municipality for supporting social mobilisation and facilitation, information management and grievance redressal.
Private Sector	Private organizations such as real-estate builders/developers, construction material suppliers, contractors, consultants and financial institutions will assist in the reconstruction process.
National and international partner organizations	Several international organizations such as UN-Habitat, British Red Cross, BRAC International, LWF, the Association of Non-Resident Nepalese, Architects without Borders Nepal and a wide range of Nepali institutions, such as NSET, Lumanti, the National Heritage Preservation Committee, the Center for Integrated Urban Development, Society of Nepalese Architects (SONA), Nepal Engineers Association (NEA) and others, including academic institutions, have expressed commitments for urban support, and started supporting local communities with technical support, trainings, research and other activities.

MoUD and MoFALD will lead the implementation of recovery interventions for the urban housing and settlements sector at the national level, with the goal to ensure all affected housing units are reconstructed or rehabilitated. The DUDBC, through its Division Offices in the earthquake-affected districts will be the key implementing agency of programmes in this sector. The disbursement of housing grants and issuance of building permits to ensure safe housing and settlements reconstruction will be a major responsibility of concerned municipalities and VDCs governing the urban centres. Other stakeholders, including UN agencies, NGOs, development and cooperating partners, the private sector and artisans will also provide technical and financial support towards

the sector’s prioritised recovery and reconstruction interventions. The programmes will be implemented through NRA Project Implementation Units formed at central and district levels.

A separate Central Level Project Implementation Unit (CL-PIU) will be established under the Ministry of Urban Development at the centre to coordinate with NRA, related ministries, departments, and other partner organisations, for effective reconstruction, and implementation of reconstruction of settlements and residential buildings. All the important technical decisions related to planning, technical assistance and reconstruction would be taken by the CL-PIU.

In addition to the CL-PIU, the District Level Project Implementation Unit (DL-PIU) will be established under the Ministry of Urban Development (MoUD) that is authorised to quality control of the reconstruction of residential buildings.

In line with NRA’s overall policy, the principles of inclusive and area-based approaches will be applied, through application of area-wide beneficiary enrollment, the mobilisation of community groups, the strengthening of reconstruction committees and the strengthening of planning and coordination capacity for municipalities in order to engage with community groups and reconstruction committees.

For heritage settlements, an urgent classification is required with regard to mandatory conservation needs and capacities at community level for recovery engagements, and with regard to planning, economic initiatives and financial capacity. Individual and cooperative lending capacities have to be assessed.

Coordination mechanisms need to be strengthened or set up, connecting recovery representatives, municipalities, districts, KVDA and national institutions.

Risk Analysis

The main risks and mitigation measures to minimise the risks are as follows:

Table 3: Risk Analysis

Risk	Mitigation Measure
Unavailability of funds, particularly for the urban poor	Coordinate with financing institutions to ensure availability of funds
Rapid urbanization due to migration to cities	Timely implementation of rural housing and livelihood programmes. Proper planning and coordination among all stakeholders
Lack of interest in using traditional materials and designs for reconstruction of heritage settlements	Increase public awareness about benefits of traditional building technologies. Provide information on how traditional heritage buildings can be built

7. Financial requirements and planning

Rationale for financial estimations

According to the PDNA, the number of houses which collapsed within Kathmandu Valley is 138,093 (23%) and out of Valley is 479,363 (77%). The PDNA further estimated the building typologies as follows:

- For the valley - mud (24%), cement mortar (38%) and RCC (38%)
- Outside valley - mud (77%), cement mortar (15%) and RCC (8%)

Based on rental loss calculations from the PDNA report, the number of damaged rental units is as follows:

- Kathmandu + rest of valley + outside valley = $30182+5415+20492 = 56,089$
- Whereas the number of destroyed rental units = $21988+13063+7958 = 42,909$

The census report of the year 2011 indicates that the proportion of rented and self-owned households in urban areas is 40.22%, whereas it is only 6.26% for rural areas. From above figures, it can be estimated that a total of 139,455 houses have collapsed and 106,685 houses are damaged in urban areas.

Considering that all RCC buildings and 50% of total cement mortar houses covered by the PDNA are in urban areas, the number of houses collapsed and damaged are presented in Table 4.

Table 4: Number of collapsed and damaged houses

Type of damage	Number of houses by PDNA typology			
	RCC	Cement mortar	Low strength masonry	Total
Collapsed	6,613	9,107	123,735	139,455
Damaged	16,971	32,930	56,784	106,685

However, for the purpose of calculating the government housing subsidy in this report, the number of houses in municipalities outside Kathmandu Valley has been included in the Rural Housing Sector. Therefore, the housing subsidy required for urban households has been calculated only for 72,399 fully collapsed houses in Kathmandu Valley, which is the figure mentioned in PDNA. This number may increase, once the detailed survey for Kathmandu Valley is completed.

Although the cost of reconstruction of collapsed or damaged houses is generally quite high, for the purpose of this report the funding requirements will only cover the grant amount of NRs 200,000 to be provided to every collapsed house.

The unit costing adopted for other activities related to urban reconstruction is as follows:

- a) Regeneration of 63 (52 in Kathmandu Valley) heritage settlements @ NRs. 15,000,000. Larger settlements will require higher levels of funding.
- b) Risk sensitive land use plan preparation and implementation for 31 settlements with adequate provision for open spaces @ NRs. 50,000,000 per settlement
- c) Cost of Rental Housing Support for the urban poor is as per the estimated budget mentioned in the MoUD Sectoral Reconstruction Plan.
- d) Vulnerable top up housing subsidies as per NRA policy for urban housing recovery.
- e) Repair and retrofit subsidy as per NRA policy for urban housing recovery.
- f) Emergency and temporary shelter needs includes camps and services for existing camps
- g) NRs. 100 million is allocated for safe demolition and debris management for remaining damaged houses
- h) Community infrastructure rehabilitation work for 63 urban settlements at the rate of NRs. 100 million per community.
- i) NRs. 5 million is allocated for material supply chain and livelihood and enterprise development to support housing recovery.
- j) NRs. 1 billion is allocated for development and promotion of environmentally sustainable housing and services.
- k) NRs. 1 billion is allocated for communication campaign and media for promotion of safer building in urban areas
- l) Reclustering of urban settlements (a total of NRs. 10,525 million as provisioned under the PDNA). However, this cost has been removed as much of it has been included in other activities.
- m) Revitalisation of 44 informal settlements of Kathmandu Valley @ NRs. 50,000,000.
- n) Preparation of guidelines, planning norms, standards, bye-laws for safer housing and settlement reconstruction (89 sets of documents for municipalities and 5 sets for other urban settlement typologies, including high-rise building norms and standards) @ NRs. 900,000.
- o) Construction of 1 model house in each of 30 urban settlements @ NRs. 10,000,000., and demonstration of repair and retrofit works @ 5,000,000
- p) Capacity enhancement for building back better, including TOT, technical training for safe construction and planning for resilient cities and technical assistance
- q) Review national plans, strategies and building codes
- r) Preparation of housing technology and design options

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- s) Implementation of national plan of action for safer building construction.
- t) Setting up resource and training centres
- u) Institutional development
- v) Real estate building costs are estimated to be NRs. 15,500 million as PDNA for 10,700 housing units from 83 high rise buildings and 2881 bungalows from 45 colonies, but as this is part of private funding and much of it is covered by insurance, it is not included in this report.
- w) Funding support for financing urban housing, including housing credit of NRs 2,500,000, is estimated to be NRs. 19,841 million assuming 50% of total households seek financial support at 3% of interest and service charges for 10 years period of repayment. Similarly, assuming 20% of the households take the NRs. 300,000 credit, at 3% interest for 10 year period is estimated to be NRs. 952 million.
- x) Technical assistance for revitalisation of traditional settlements in 22 municipalities of Kathmandu valley for (@ NRs. 200,000,000 per municipality).

Total funds required per year

Based on the above-mentioned assumptions, the total funding required for urban reconstruction is estimated to be NRs. 90,059 million. The breakdown of the funds required is presented in Table 5.

Table 5: Fund Requirements

S/N	Name of programs	Total	Year 1	Year 2	Year 3	Year 4	Year 5
A1	Restore urban housing and settlements						
A1.1	Integrated recovery and reconstruction of historic settlements						
	Regeneration of 63 (52 in Kathmandu valley) heritage settlements	20000	4000	4000	4000	4000	4000
A1.2	A1.2 –urban area planning and recovery support						
	Housing Reconstruction	20000	4000	4000	4000	4000	4000
	Funding support for financing housing credit	20793	4159	4159	4159	4159	4157
	Vulnerable top up subsidy	3000	600	600	600	600	600
	Repair and retrofit subsidy	3000	1000	1000	500	500	
	Material supply, enterprise, livelihood	5000	2000	1500	500	500	500
	Sustainable housing services	1000	200	200	200	200	200
	Emergency shelter and media	1000	500	200	100	100	100
	Community grants for local infrastructure	6300	1500	1500	1500	1500	300
	Safe demolition	100	75	25			
	Communication campaigns	1000	250	250	250	125	125
	Risk sensitive land use plan preparation and implementation for 31 settlements with adequate provision for open spaces	1550	310	310	310	310	310
	Rental housing for urban poor	250	50	50	50	50	50
A2.	Enhance urban resilience						
A2.1	Enhance partnerships for the mainstreaming of DRR and improved urban resilience						
	Integrated recluster of urban settlements	1000		250	250	250	250
	Preparation of Guidelines, planning norms, standards, bye-laws for safer housing and settlement reconstruction	85	60	25			
	Construction of 1 model houses in each of the 30 urban settlements	45	30	15			

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	Institutional development and capacity enhancement for building back better	1200	250	250	250	250	200
	Review national plans, strategies and building codes	16	10	6			
	Preparation of housing technology and design options	20	10	10			
	Implementation of national plan of action for safer building construction	100	10	25	25	25	15
	Setting up resource and training centres	200	100	100			
A.2.2	A.2.2. Mobilise high-density urban areas in Kathmandu Valley towards improved safe and accessible public spaces.						
	Technical assistance for revitalization of traditional settlements of Kathmandu valley	2200	500	500	500	500	200
	Revitalization of 44 informal settlements of Kathmandu valley	2200	200	500	500	500	500
		90059	19814	19475	17694	17569	15507

Sources of funds

While the government will be the main source of funds for urban reconstruction, there will also be contributions from I/NGOs, the private sector and local communities.

Urban (Housing)

TABLE: FINANCIAL REQUIREMENTS FOR PRIORITY RECOVERY PROGRAMME

	Year	2016	2017	2018	2019	2020	Total	On-budget sources	Off-budget sources	Unknown
Budget in Million NPR		19,814	19,475	17,694	17,569	15,507	90,059	20,000		70,059
Program										
Regeneration of 63 (52 in Kathmandu valley) heritage settlements		4,000	4,000	4,000	4,000	4,000	20,000			20,000
Housing Reconstruction		4,000	4,000	4,000	4,000	4,000	20,000	20,000		
Funding support for financing housing credit		4,159	4,159	4,159	4,159	4,157	20,793			
Vulnerable top up subsidy		600	600	600	600	600	3,000			
Repair and retrofit subsidy		1,000	1,000	500	500		3,000			
Material supply, enterprise, livelihood		2,000	1,500	500	500	500	5,000			
Sustainable housing services		200	200	200	200	200	1,000			
Emergency shelter and camps		500	200	100	100	100	1,000			
Community grants for local infrastructure		1,500	1,500	1,500	1,500	300	6,300			
Safe demolition		75	25				100			
Communication campaigns		250	250	250	125	125	1,000			
Risk sensitive land use plan preparation and implementation for 31 settlements with adequate provision for open spaces		310	310	310	310	310	1,550			1,550
Rental housing for urban poor		50	50	50	50	50	250			250
Integrated reculstering of urban settlements			250	250	250	250	1,000			
Preparation of Guidelines, planning norms, standards, bye-laws for safer housing and settlement reconstruction		60	25				85			85

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Construction of 1 model houses in each of the 30 urban settlements	30	15				45	45
Institutional development and capacity enhancement for building back better	250	250	250	250	200	1,200	1,200
Review national plans, strategies and building codes	10	6				16	16
Preparation of housing technology and design options	10	10				20	20
Implementation of national plan of action for safer building construction	10	25	25	25	15	100	100
Setting up resource and training centers	100	100				200	200
Technical assistance for revitalization of traditional settlements of Kathmandu valley	500	500	500	500	200	2,200	2,200
Revitalization of 44 informal settlements of Kathmandu valley	200	500	500	500	500	2,200	2,200



PRODUCTIVE SECTORS

Agriculture & Irrigation

Tourism



Sector Action Plan (SAP)

**AGRICULTURE, LIVESTOCK DEVELOPMENT AND
IRRIGATION**

Post-Disaster Recovery Framework, 2073



May 2016

AGRICULTURE, LIVESTOCK DEVELOPMENT AND IRRIGATION

1. Situation Analysis

Damages and losses in the agriculture sector were significant. The estimated number of small and vulnerable farming households affected in the 24 districts by the earthquake disaster surveyed in the PDNA is around 1 million, among them female-headed households outnumber male. Damage has occurred on around 1000 hectares of land that were rendered useless due to landslides and landslips; lands which will most likely not be recovered. Internally displaced people from high hill areas reported huge landslides damaging their maize crop and killing their livestock; and significant amounts of crops and livestock were left behind unattended. Agricultural service delivery was affected by death and injury of technicians, damage to office buildings and equipment, and service delivery stations. The overall recovery and reconstruction was estimated in the PDNA at USD 147 million for the 24 surveyed districts. This Sector Action Plan covers the entire 31 districts envisioned in the PDRF and considers the investments in capacity and support required for the implementation of the plan.

2. Strategic Recovery Vision For The Sector

The Agricultural, Livestock and Irrigation sector vision is laid out in the Agricultural Development Strategy (ADS) for 2015-2035, which was finalised in 2013. The 2015 disaster necessitates the inclusion of a Strategic Recovery Vision (SRV) and Sector Action Plan (SAP) which contributes to the overall priority outputs of the ADS: Improved Governance, Higher Productivity, Profitable Commercialisation and Increased Competitiveness in light of the post-disaster context.

The SAP identifies 46 priority programs based on a technical review of the PDNA, follow-up assessments for the sector, key strategy documents and agreed action plans. The programs are designed to be pro-poor, ensure timely delivery of most urgently needed inputs, contribute to the longer-term sustainability of the sector and incorporate the best practices in climate change adaptation, food and nutrition security, and disaster risk management. The SAP also utilises the opportunity to incorporate resilience building strategies at both the institutional and community levels.

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The Agriculture and Irrigation SAP incorporates activities under three ministries; Ministry of Agricultural Development (MOAD), Ministry of Irrigation (MOI) and the Ministry of Livestock Development (MOLD). The identified recovery programs have been jointly designed and are necessarily aligned with cross-cutting themes. This document lays out the SAP in a manner that sustainably and effectively addresses the most urgent sectoral needs, while laying the platform for the longer-term vision entailed within the ADS.

The identified recovery programs have been developed around **8 Strategic Objectives** identified by the technical team for the development of the strategic recovery vision and the SAP. The objectives complement the longer-term vision of the ADS, yet focus efforts on recovery programming within the five-year PDRF implementation period:

Strategic Objective 1	Stimulate Crop Productivity in Affected Areas
Strategic Objective 2	Revive Livestock and Poultry Production Systems
Strategic Objective 3	Rehabilitate and Reconstruct Damaged Irrigation Schemes
Strategic Objective 4	Rehabilitate and Reconstruct Fisheries Infrastructure and Services
Strategic Objective 5	Rehabilitate Key Agriculture Infrastructure and Networks
Strategic Objective 6	Integrate Food and Nutrition Security Policies and Action Plans
Strategic Objective 7	Strengthen Governance Capacity
Strategic Objective 8	Build Resilience to Climate Change and Natural Disasters

The SAP aims to attain its objectives through the implementation of 46 unique programs to be implemented under the direction and management of the three ministries. Importantly, the programs will be sequenced to ensure immediate recovery needs are met in the timeliest manner, yet key capacity and resilience building actions, which are crucial to the effective use of resources, are also undertaken. Investments in rebuilding systems and service provision capacity are equally as important as the replacement of productive assets during the recovery phase. The emphasis on building-back-better, and safer, cannot be overstated. Innovation will also play a role and will be based on best practices and lessons learned in the agricultural sector in both Nepal and the international context.

3. Current Status of Ongoing Recovery Efforts in The Sector

The MOAD, MOI, and MOLD have been actively addressing recovery needs in the affected areas since immediately following the disaster. They have used existing program resources, in coordination with limited inputs from development partners, to identify and address the most urgent needs of the affected communities. The agricultural sector, as well as other sectors considered non-critical during the humanitarian response, commenced major activity

implementation during the recovery stage. Work continues on replacement and distribution of agricultural assets, the repair and rehabilitation of infrastructure, and some provision of capacity building through service extension to the extent possible.

Ongoing work is categorised broadly into three main areas: 1. food assistance to the earthquake affected populations, 2. support for food security and agriculture stabilisation for affected populations, and, 3. the re-establishment of agricultural based livelihoods of vulnerable EQ-affected small holder farmers. The activities are closely monitored by the MOAD Food Security Cluster (FSC) and tracked for implementation status on a quarterly basis. Many activities, and the agencies which implemented them, concluded in December of 2015 or are scheduled to end in mid-2016. For this reason the development of the PDRF SAP is quite timely and addresses a growing gap in recovery program funds available for the sector.

To target the ongoing and future work, the ministries have collaborated with the development partners to conduct follow up assessments which have highlight gaps in the PDNA data and its analysis. Key documents used for this review of the PDNA were: the May 2015 FSC Assessment of 14 most affected districts, the Agricultural Livelihoods Impact Assessment (ALIA) also in May 2015, and the Food Security, Livelihoods and Early Recovery Joint Assessment conducted in partnership with the National Planning Commission (NPC) in November 2015. The ongoing recovery activities remain coordinated through the line ministries and in particular the FSC of the MOAD, however there is still a need for an overarching framework to ensure alignment to the recovery needs and overall goals of the ADS. For this reason the development of the PDRF is timely and welcome.

4. Expected Sector Results and Indicators

The identified Strategic Objectives, Indicators and Programs within the SAP are identified as follows:

<i>Strategic Objective</i>	<i>Indicators</i>	<i>Program</i>
<i>Strategic Objective 1: Stimulate Crop Productivity in the affected areas</i>	<i>Sustainable farming, good agricultural practices (GAP) with increased cropping intensity and productivity within the Earthquake affected areas.</i>	Cereal crop production enhancement: improved seed varieties, introduction of new crop varieties, fertilizer, pesticides
		Horticultural Crop production enhancement (high value and export potential crops): support for improved nurseries with new varieties and associated marketing.
		Replacement of agricultural inputs, tools and machinery; focus on hill-specific mechanization in affected areas
		Seed Production and Multiplication Program (cereals, vegetables, tubers, nurseries)
		Enhance outreach and extension support services (including capacity building of female trainers) in key relevant areas; machinery operations and maintenance, masonry and construction skills and , technical support and entrepreneurship development.
		Post-Harvest Facilities: community grain stores, household level storage capacity
		Value chain and market linkage development: to include apiary, mushroom, herbal, non-traditional crops
<i>Strategic Objective 2: Revive</i>	<i>Population of improved animal</i>	Improved livestock management: animal health care and nutrition provision

Livestock and Poultry production systems	breeds increased and good veterinary animal husbandry practices (GVAHP) are established and adopted.	Reconstruction of livestock infrastructure: shelters, dipping tanks, feeding troughs, water tanks, breeding sheds
		Production enhancement: improved breeds, introduced species, vaccines, semen (AI) and minerals for animal health
		Restocking with improved breeds of livestock and poultry including piggery
		Integrated dairy processing and market facility establishment
		Livestock and Poultry Management: to include extension services, training, technical support and outreach.
		Replacement of inputs, tools and machineries.
Strategic Objective 3: Rehabilitate and Reconstruct damaged Irrigation Schemes	Number of SSIS rehabilitated and increased crop production through maximized water productivity	Immediate repair and rehabilitation of Small Scale Irrigation Schemes (SSIS)
		Medium and large scale scheme reconstruction
		Water harvesting pond and tank construction in key areas
		Multi-Use Water System Constructions (for examples drip/springs/well)
		Reconstruction of building facilities (e.g. Office buildings)
		Water management assessment and capacity enhancement
Strategic Objective 4: Rehabilitate and reconstruct fisheries infrastructure and services	Number of damaged fish ponds rehabilitated, increased fish production and market linkages established.	Reconstruction and rehabilitation of fish ponds and hatcheries/resource centers: Nuwakot, Rasuwa, Dhading, Gorkha and Sindhupalanchok
		Input supply to Fisheries production: fingerlings, feed, chemical inputs
		Extension and outreach services from these districts to other districts

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		Market development and linkages: processing and handling
		Facilitate access to subsidized credit for affected fish growing farmers
Strategic Objective 5: Rehabilitate key agricultural Infrastructure and networks	Number of agri infrastructure rehabilitated and operational in the affected areas.	MOAD/MOLD: Building Rehabilitation and Reconstruction at District Head Quarters
		Agricultural and livestock Service Center rehabilitation
		Warehouse - Rehabilitation and Reconstruction
		Slaughter house construction - in line with regulations on food safety
		Grain mill establishment including water mill (hydro multi-purpose power sourcing)
		Agricultural and Livestock resource center reconstruction and establishment
Strategic Objective 6: Integrate food and nutrition security policy and action plans	Enhanced food safety and quality, increased awareness among the affected population and improve nutrition and diet behavior.	MOAD/MOLD: Strengthening of Disaster Relief Management Section (Contingency and Preparedness Planning at national and district)
		Training/Outreach: Crop and livestock diversification and nutrition awareness
		Support to outreach services: school and institutional gardens, nutrition, diet and sanitation awareness and BCC (Behavioral Change Communication) campaigns
		Key reserves: seed, storage bags, emergency food stocks (in line with MOAD and MOLD Contingency Plan)
		Food Safety: Meat and Food handling, processing, transport and storage
Strategic Objective 7: Strengthen Governance Capacities	Strengthen performance among institutions involved in	Program planning, monitoring and evaluation activities
		Outreach and extension support

	implementation of Sector Action Plan Partners	Expand training and capacity building opportunities to youth and returnee migrants
		Local assessments and market development in coordination with public private partnership approach
		Targeted vulnerable group support programming- women, elderly, indigenous (credit, grants, in-kind)
Strategic Objective 8: Build resilience to Climate Change and Natural Disasters	Community based adaptation through integrated management agri, water, forest and bio-diversity achieved	Develop Disaster Risk Reduction Plan including contingency plans for the sub-sectors
		Mapping of stress tolerant varieties and breeds of crops, livestock and fish for the development of climate resilient agriculture.
		Establish an early warning system and adopt early warning information for managing climate change risks in agriculture and food and nutrition security.
		Strengthen the seed and fodder reserve system to cope with natural disasters
		Improve capacity of extension staff and farmers in climate smart agricultural practices

5. Priority Recovery Programs

The programs included in the SAP have been identified based on criteria pertinent to fulfilling the most urgent recovery needs of the sector and the families reliant on it. It is also a key consideration that the programs enable the restoration of the functioning of basic operational systems and structures essential to restart sectoral growth. Priority programs must also ensure strong roles for district level authorities and sufficient capacity building to enable proper implementation, oversight, and monitoring of programme performance. Lastly, all programs must also contain ‘build-back-better’ elements that consider existing and future threats, and are scalable and replicable beyond the 31 districts of the PDRF.

Due to the required interconnectivity of the programs, they have not been ranked sequentially in order of importance or priority, however they have been placed within a *scale of priority* covering three categories: 1. Prioritised within the first 24 months, 2. Prioritised within the first 72 months, and 3. Prioritised throughout the 5-year plan. The programs falling in category one are those which must be completed in the first year of the plan, and likewise for the category 2 programs to be finished before 72 months. Lastly, the category 3 programs are support and capacity programs which must operate from the beginning and throughout the plan in order to ensure effective implementation of the plan as a whole.

It is important to note that this SAP cannot be compared directly to the Agricultural Section of the PDNA as the scope and design of the two exercises were quite different. The PDNA was a rapid assessment conducted with quite limited field data and did not have access to the significant amount of survey work and assessment findings available at this point. The PDNA also focused its estimates on a three-year timeframe whereas the PDRF SAP lays out its objectives and programs, sequenced for complementarities, over a five-year period. Lastly, the PDNA focused on the 24 most highly earthquake-impacted districts and the SAP covers the complete 31 districts impacted.

The SAP provides a more comprehensive view of the sector and encompasses the accomplishments and key cross-sectoral commitments of the Government before and since the disaster. The SAP considers commitments to nutrition contained within the Zero Hunger Initiative of 2016, the Multi-Sector Nutrition Plan 2013-2017 and the Food and Nutrition Security Plan of Action 2015. The document also, crucially for the sector, recognises the National Climate Change Plan of Action and the National Environment Policy Act. The SAP will closely align with that of the Forestry and Environment Sector under the PDRF, particularly regarding agro-forestry development.

6. Implementation strategy and Risk analysis

The **implementation arrangements** for the ADS and the SAP require coordination among different agencies and stakeholders. Policy, legal and analytical skills are currently dispersed between ministries at the national level, however the ADS Implementation Unit (ADSIU), developed in 2014, has the capacity to pull together these actors for further policy formulation and analysis, and will contribute to bridging the gap between policy and implementation. The unit at MOAD (focal division: Policy and International Cooperation Coordination Division) will support the SAP implementation and capacity building of related stakeholders and the agencies involved in program implementation and coordination. The MOAD, MOI, and MOLD will work closely with NRA, development partners and relevant agencies at NPC, MOF, MOI, MFALD, FNCCI, and in University of Agriculture and Forestry and Tribhuvan University.

For implementation of the recovery programs, the individual ministries and relevant departments will **utilise existing structures** and resources, bolstered by the direct investment in capacity building and system improvement foreseen under Objective 7: Strengthen Governance Capacity. The government will coordinate with its existing network of development partners at all levels for the implementation of the programs under the SAP. The MOAD currently manages international coordination through the Food Security Cluster of the Disaster Relief Management Section of the MOAD Policy and Planning Division. Where required for joint programming between ministries, **Program Management Units** will be formed for the local design and implementation oversight of the programs at both the national and district levels. The MOAD and the NRA will support a network of Livelihoods Working Groups at the district level (several already established) that will coordinate and oversee activities at the district and VDC level.

The **targeting of the inputs at the district and local level** will be undertaken through a consultative process to ensure transparency and accountability. Additional workshops at the district level will be held for confirmation of the prioritised areas and to include program implementers and recipients in the monitoring of benefits. The SAP and its programs will also benefit from the oversight of the existing District Disaster Relief Committees (DDRC) operating in the targeted areas. This work has been foreseen within Objective 8: Build Resistance to Climate Change and Natural Disasters, and will drive the ‘build-back-better’ approach underlying the SAP.

The ministries will **leverage key partnerships** with technical agencies to increase implementation capacity, particularly for the transfer and delivery of inputs, and technical capacity building. UN agencies and NGO partners have existing operational structures and relationships with communities which will allow program to more rapidly access the areas prioritised for immediate service and input provision in the first, two-year phase of the SAP. Partnerships will also be beneficial for increasing the focus of programs towards vulnerable groups, including women, minorities, youth and the disabled.

A key strength of this SAP is the **inclusion of cross-cutting issues** as integral to its design and implementation. In particular, DRR and Climate Change Adaptation have been given a priority in the design of the SAP. Nepal has an estimated 66% of its households reliant on the Agricultural Sector¹⁶ and within the earthquake affected areas the number increases to 74%¹⁷. Rural agricultural communities are most vulnerable to climate change and their livelihoods face an ongoing threat. The identified programs include specific provisions for activities to address social protection (insurance schemes and access to credit), gender and social inclusion (targeting of women’s cooperatives and entrepreneurs) and recognition of targets for minorities and other vulnerable groups. Close coordination with the Employment and Livelihoods Sector will be necessary for the effective implementation of the SAP. An emphasis will be made to introduce drudgery reducing, labor efficient and cost effective technologies to address labor shortages due to out-migration and the subsequent increasing feminisation of agriculture.

Key linkages have been made within this SAP and that of the Environment and Forestry Sector based on the Rapid Environmental Assessment conducted following the earthquakes. Harmonisation of the two documents is crucial to ensure that the demands of the agricultural sector and needs for sustainable forest use and conservation are balanced and synergised. Key areas in which the sectors converge include:

¹⁶ www.moad.gov.np

¹⁷ Joint Assessment of Food Security, Livelihoods and Early Recovery November 2015

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- Development of early detection and surveillance systems for spread of invasive alien plant species, disease and pests, actions to control them,
- Support for local production systems, and promote employment that enhances the environment in recovery programs, such as green jobs (e.g. ecosystem restoration activities); and sustainable livelihoods in-forest, on-farm and off-farm depending on local opportunities, to reduce forest dependency.
- Promote organic agriculture and optimum use of chemical fertilizers based on NARC recommendations combined with organic manure, green manure and capacity building for composting, and regulate and monitor pesticide use.
- Support intensive agriculture under protected structures to reduce the possibility of horizontal expansion of agricultural land, rehabilitate farm and non-farm based micro-enterprises to create employment opportunities for disaster affected communities.
- Support activities to assess and rehabilitate irrigation schemes, considering possible impacts on freshwater biodiversity and water demand for agriculture, and addressing the risk of transmitting waterborne diseases from livestock to wildlife and vice versa.
- Investment in agroforestry, climate adaptation and climate-smart agriculture; watershed and water resource management; soil and nutrient conservation.

The SAP will delegate significant level of authority and decision-making power to officials at the district level. Many of the programs will be both targeted and planned through existing committees with local leadership. Regional NRA Officers, along with representatives of the line agencies, will be key members of these committees and play a facilitation and oversight role; assisting also with monitoring and evaluation for the effectiveness of programs to provide lessons learned for scale-up and replication.

The SAP, and the endorsed ADS, incorporates recommendations for strengthening Gender Equality and Social Inclusive (GESI) issues such as making agricultural extension services GESI responsive including the representation of women in the local level Junior Technical Assistant (JTAs) structure. While integrated across objectives, a specific focus is also contained within Objective 7: Strengthen Governance Capacity.

Several key **implementation issues** have been identified which will require address to ensure the success of the SAP.

- 1. District level delegation of authority** - The SAP contains devolution of responsibilities with adequate funding and capacity building measures to support the district level.
- 2. Lack of Results-Based monitoring and evaluation structures**–The SAP will include Results Based Management structures, protocols and tools to ensure timely management of activities and funds.
- 3. Persistent delay of funds to districts**–There is a need to address the recurrent issue of delay in the transfer of funds from the central to districts –this is particularly sensitive to agricultural sector due to cropping cycles.

4. **Lack of clarity in coordination structures and mechanisms** – It is recommended to utilize existing coordination mechanisms at the district levels and clearly elaborate mandates among PDRF partnering government agencies.
5. **Lack of clarity on the role and presence of the NRA**–It is recommended to develop a Communication Strategy to raise awareness of roles, responsibilities and mandates. This may include regular dissemination of progress updates.

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As with all plans, there are **foreseeable risks** that can be either addressed or mitigated before and during implementation. Key risks to the implementation of the SAP, the likelihood of their occurrence and the potential mitigation measures have been identified in the table below.

Potential Key Risk	Likelihood of occurrence (High, Medium, Low)	Impact level (High, Medium, Low)	Mitigation Actions
Insufficient capacity to implement	Medium	High	Ensure capacity building within priority programming
Failure to adhere to timelines	High	High	Ensure realistic timelines and effective coordination mechanisms
Coordination breakdowns	High	High	Appropriate management structures and key roles clearly outlined
Delayed transfer of funds from central to district level	High	High	Review existing mechanisms and propose improvements
Political instability creates obstacles to implementation	Medium	Medium	Avoid with political linkages
New disaster event distracts from progress toward achievement	Medium	High	Mainstreaming of disaster preparedness within a build-back-better approach

There are additional risks at the local level which must be identified and addressed in the individual context. District Livelihood Working Groups, working with the NRA and the MOAD, MOI and MOLD, will undertake such assessments to ensure that the SAP is **‘risk-proofed’ to the extent possible by consideration of local knowledge** and recommendations.

Financial requirements and planning

Following the disaster, the Revised Flash Appeal of May 29th was estimated and released for USD 98.6 million for the Food Security Cluster, under which most agricultural activities were included. Of the requested amount, only 31% was funded (approximately USD 30 million). The PDNA estimated the needs for the Agricultural Sector at USD 147 million for the three-year timeframe of the anticipated recovery phase. There was little recognition of sectoral strategies, potential growth areas, and the required investments in governance capacity and resilience building, now recognised as crucial to investment in the sector.

The SAP financial requirements are placed within a five-year expenditure plan and are inclusive of existing sectoral commitments and agreed approaches and action plans. The SAP also covers the entire 31 affected districts as opposed to the 24 districts covered in the Agricultural Section of the

PDNA. The strategic vision of the SAP goes beyond rehabilitation, reconstruction and replacement of lost assets, into a fully encompassing vision for the growth of the sector based on the ADS and supporting strategies. Given this broader vision, the increase in geographical coverage and inclusion of governance capacity building the SAP estimates USD 251 million for the five-year implementation period.

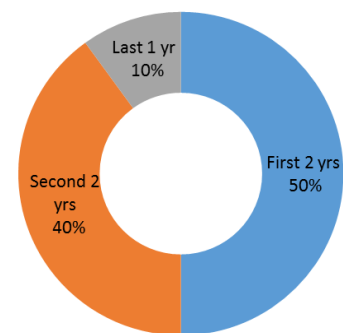
The allocation of funds will initially be focused primarily on the 14 most affected districts, particularly in terms of productive asset replacement and infrastructure rehabilitation and reconstruction. Governance capacity building will begin simultaneously and be carried out across the 31 affected districts. The proposed financial plan does not consider ongoing funded activities; rather it encompasses the full range of activities for the SAP commencing from July 2016 (coming fiscal year).

The financial expenditure plan has been broken down to **three implementation periods** that contain sequenced prioritisation of activities:

First 24 months –50%

1. Replacement of productive assets with focus on increased production.
2. Rehabilitation and reconstruction of key agricultural infrastructure including buildings, resource and service centres, irrigation schemes, etc.
3. Governance Capacity development investment –extension service and outreach.
4. DRR and Climate change adaptation integration.

Graph 1: Implementation period costs break down



Second 24 months –40%

1. Rehabilitation and reconstruction of key agricultural infrastructure including buildings, resource and service centres, irrigation schemes, etc.
2. Governance Capacity development investment –extension service and outreach.
3. Market development, value-chain enhancement, and competitiveness.
4. Continuance of institutionalisation of resilience building strategies.

Final 12 months –10%

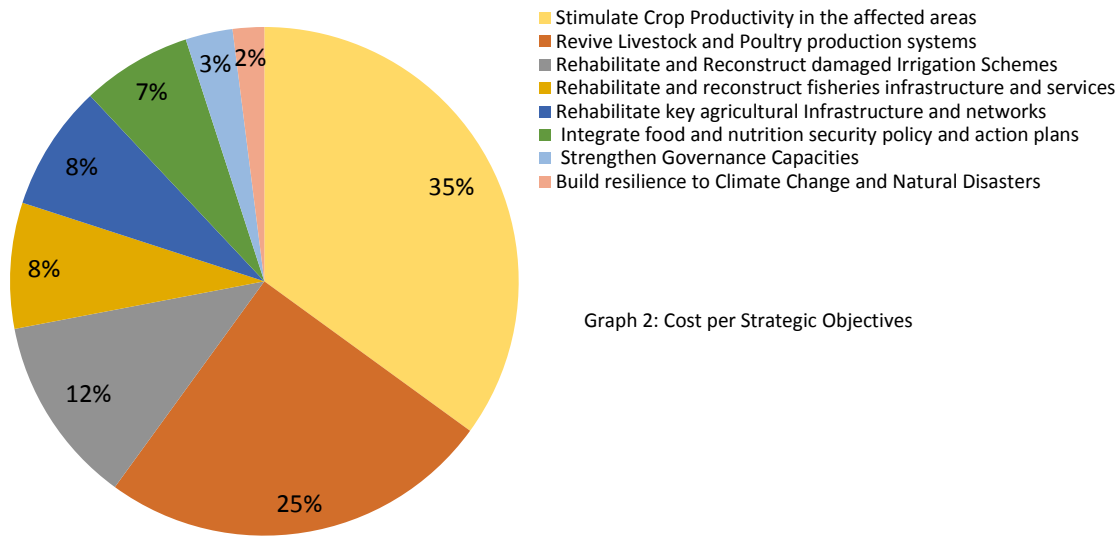
1. Further focus on governance, integration of multi-sectoral approaches into longer-term planning.
2. Market development, value-chain enhancement, competitiveness
3. Lessons learnt, review of approaches and strategies, transition to regular financial mechanisms and exit strategy actions.

The SAP technical team based its initial estimates on the PDNA of 15 billion NPR (approximately USD 147 million), however also considered a 20% increase due the addition of 2 supplementary years in the PDRF framework, and a 25% increase due to the expansion into 7 new districts. An

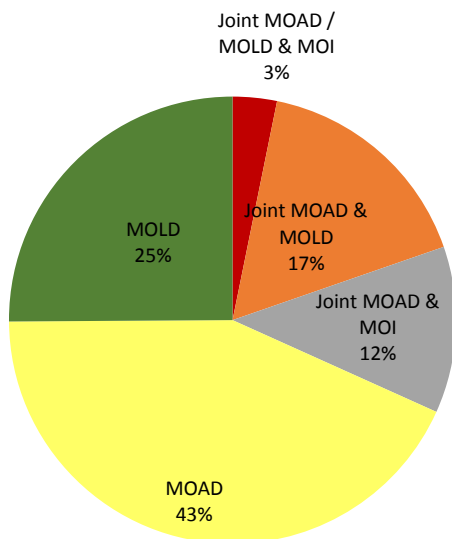
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additional sum has been added for the inclusion of sustainability actions within Objectives 7 and 8. The **financial requirements have been estimated for each program**, and then designated to individual ministries. Where relevant, funds have been allocated for joint ministerial implementation. The SAP will apply the government's Gender Responsive Budgeting (GRB) principles in all programs.

Currently, there are no committed financial resources allocated for the SAP, however a financial review process will be organised between the NRA, line ministries and the Ministry of Finance to clearly lay out the allocation of funds per sector and ministry as matched against available funds. The line ministries will rely on the guidance of Cabinet for the direction of individual ministerial budget development.



Graph 2: Cost per Strategic Objectives



Agriculture, Livestock Development and Irrigation

TABLE: FINANCIAL REQUIREMENTS FOR PRIORITY RECOVERY PROGRAMME

	Year	2016	2017	2018	2019	2020	Total
	Budget in Million NPR	6,723.6	6,723.6	5,378.9	5,378.9	2,689.4	26,894.4
Program							
Cereal crop production enhancement: improved seed varieties, introduction of new crop varieties, fertilizer, pesticides		437.5	437.5	350.0	350.0	175.0	1,750.0
Horticultural Crop production enhancement (high value and export potential crops): support for improved nurseries with new varieties and associated marketing.		437.5	437.5	350.0	350.0	175.0	1,750.0
Replacement of agricultural inputs, tools and machinery; focus on hill-specific mechanization in affected areas		262.5	262.5	210.0	210.0	105.0	1,050.0
Seed Production and Multiplication Program (cereals, vegetables, tubers, nurseries)		196.9	196.9	157.5	157.5	78.8	787.5
Support extension services, training, technical support and outreach		415.6	415.6	332.5	332.5	166.3	1,662.5
Post-Harvest Facilities: community grain stores, household level storage capacity		175.0	175.0	140.0	140.0	70.0	700.0
Value chain and market linkage development: to include apiary, mushroom, herbal, non-traditional crops		437.5	437.5	350.0	350.0	175.0	1,750.0
Improved livestock management: animal health care and nutrition provision		366.8	366.8	293.5	293.5	146.7	1,467.4
Reconstruction of livestock infrastructure: shelters, dipping tanks, feeding troughs, water tanks, breeding sheds		183.4	183.4	146.7	146.7	73.4	733.7
Production enhancement: improved breeds, introduced species, vaccines, semen (AI) and minerals for animal health		183.4	183.4	146.7	146.7	73.4	733.7

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Restocking with improved breeds of livestock and poultry including piggery	183.4	183.4	146.7	146.7	73.4	733.7
Integrated dairy processing and market facility establishment	330.2	330.2	264.1	264.1	132.1	1,320.7
Livestock and Poultry Management: to include extension services, training, technical support and outreach.	110.1	110.1	88.0	88.0	44.0	440.2
Replacement of inputs, tools and machineries.	330.2	330.2	264.1	264.1	132.1	1,320.7
Immediate repair and rehabilitation of Small Scale Irrigation Schemes (SSIS)	162.0	162.0	129.6	129.6	64.8	648.0
Medium and large scale scheme reconstruction	162.0	162.0	129.6	129.6	64.8	648.0
Water harvesting pond and tank construction in key areas	162.0	162.0	129.6	129.6	64.8	648.0
Multi-Use Water System Constructions (for examples drip/springs/well)	81.0	81.0	64.8	64.8	32.4	324.0
Reconstruction of building facilities (e.g. Office buildings)	162.0	162.0	129.6	129.6	64.8	648.0
Water management assessment and capacity enhancement	81.0	81.0	64.8	64.8	32.4	324.0
Reconstruction and rehabilitation of fish ponds and hatcheries/resource centers: Nuwakot, Rasuwa, Dhading, Gorkha and Sindhupalanchok	136.9	136.9	109.5	109.5	54.8	547.5
Input supply to Fisheries production: fingerlings, feed, chemical inputs	159.1	159.1	127.3	127.3	63.7	636.5
Extension and outreach services from these districts to other districts	159.1	159.1	127.3	127.3	63.7	636.5
Market development and linkages: processing and handling	42.4	42.4	33.9	33.9	17.0	169.7
Facilitate access to subsidized credit for affected fish growing farmers	42.4	42.4	33.9	33.9	17.0	169.7
MOAD/MOLD: Building Rehabilitation and Reconstruction at District Head Quarters	105.6	105.6	84.5	84.5	42.3	422.5
Agricultural and livestock Service Center rehabilitation	57.2	57.2	45.8	45.8	22.9	229.0
Warehouse - Rehabilitation and Reconstruction	105.6	105.6	84.5	84.5	42.3	422.5
Slaughter house construction - in line with regulations on food safety	105.6	105.6	84.5	84.5	42.3	422.5
Grain mill establishment including water mill (hydro multi-purpose power sourcing)	33.8	33.8	27.0	27.0	13.5	135.2
Agricultural and Livestock resource center reconstruction and establishment	105.6	105.6	84.5	84.5	42.3	422.5

MOAD/MOLD: Strengthening of Disaster Relief Management Section (Contingency and Preparedness Planning at national and district)	11.3	11.3	9.0	9.0	4.5	45.2
Training/Outreach: Crop and livestock diversification and nutrition awareness	28.2	28.2	22.6	22.6	11.3	112.9
Support to outreach services: school and institutional gardens, nutrition, diet and sanitation awareness and BCC (Behavioral Change Communication) campaigns	56.5	56.5	45.2	45.2	22.6	225.9
Key reserves: seed, storage bags, emergency food stocks (in line with MOAD and MOLD Contingency Plan)	188.2	188.2	150.6	150.6	75.3	753.0
Food Safety: Meat and Food handling, processing, transport and storage	188.2	188.2	150.6	150.6	75.3	753.0
Program planning, monitoring and evaluation activities	40.5	40.5	32.4	32.4	16.2	162.0
Enhance outreach and extension support (including capacity building of female trainers) in key relevant areas; masonry and construction skills, and local entrepreneurship development.	40.5	40.5	32.4	32.4	16.2	162.0
Expand training and capacity building opportunity to Youth and returnee migrants	40.5	40.5	32.4	32.4	16.2	162.0
Local assessments and market development in coordination with public private partnership approach	40.5	40.5	32.4	32.4	16.2	162.0
Targeted vulnerable group support programming- women, elderly, indigenous (credit, grants, in-kind)	40.5	40.5	32.4	32.4	16.2	162.0
Develop Disaster Risk Reduction Plan including contingency plans for the sub-sectors	12.3	12.3	9.8	9.8	4.9	49.1
Mapping of stress tolerant varieties and breeds of crops, livestock and fish for the development of climate resilient agriculture.	20.5	20.5	16.4	16.4	8.2	81.8
Establish an early warning system and adopt early warning information for managing climate change risks in agriculture and food and nutrition security.	40.9	40.9	32.7	32.7	16.4	163.6
Strengthen the seed and fodder reserve system to cope with natural disasters	40.9	40.9	32.7	32.7	16.4	163.6

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Improve capacity of extension staff and farmers in climate smart agricultural practices	20.5	20.5	16.4	16.4	8.2	81.8
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Sector Action Plan (SAP)

TOURISM

Post-Disaster Recovery Framework, 2073



May 2016

TOURISM

Situation Analysis

The earthquakes of April and May 2014 inflicted significant physical damage in the 14 most-affected districts, with a direct and major impact on well-known tourism destinations. However, destinations beyond the immediately-affected areas were also adversely-affected, as tourism in general declined following the earthquakes. Industry sources estimated an average decline in tourist spending per day from US\$43 to US\$35 for the immediate future, resulting in a significant impact on revenues from the sector. With a projected decline in tourist arrivals for several years, initial estimates foresaw a reduction of 40 per cent in industry returns for the first post-earthquake year and a 20 per cent reduction for the year following.

A significant proportion of tourist accommodation facilities in all categories were fully or partially damaged in the most affected districts. Several hotels in the Kathmandu Valley were damaged extensively, while many developed minor cracks. Overall damage to hotel properties was estimated at approximately NPR 16 billion, while a number of key tourism monuments and heritage sites were reduced to rubble. Some 150 kilometres of trekking trails were significantly damaged, while an additional 200 km required maintenance and repair to eliminate impediments to access to rural and mountainous areas. Domestic airline operators reported income losses totaling NPR 400 million for the month immediately following the 25 April earthquake. In total, loss of employment and revenues from the sector have been significant and sustained, although tourist numbers have begun to pick up again somewhat in 2016.

Strategic recovery vision for the sector

Recovery of tourism is vital for the overall rehabilitation of Nepal since it is largely a rural industry with linkages to many sectors and hence has beneficial multiplier effects. Tourism has become increasingly recognised as a promising tool for integrated development in Nepal, being an economic activity that transects many sectors, levels and interests. Particularly for the areas in the Nepalese mountains that were damaged by the earthquake, this sector should be encouraged, as popular trekking routes run through these districts. Trekking tourism builds on the living heritage values of mountain trails and adds a new purpose for maintaining these 'veins' of rural livelihoods. As a service sector, tourism stimulates a multitude of micro, small and medium sized enterprises as well as employment opportunities for all levels of society and inclusive of both men and women.

Each visiting tourist will bring cash into the mountain communities, and that income is needed to finance the rehabilitation of a wide range of livelihood strategies of local populations. Travel and tourism directly supported 487,500 jobs in 2014 (WTTC, 2015) and indirectly supported an additional 617,500 jobs through a range of related linkages, building on tourism as a market for local products and capturing the multiplier effect of the 'tourism dollar'. With a total of 790,118 tourist arrivals (MoCTCA, 2015) it can be stated that each tourist arriving in Nepal creates 0.6 jobs directly and another 0.8 jobs indirectly, which is an impressive employment creation record. As tourism is a unique sector where the consumer travels to the 'product' rather than the reverse, many of these jobs are generated in the rural areas across the country.

Reviewing the response of tourism post-crisis in various destinations worldwide, the sector has proven to be resilient and optimistic in its ability to turn around in the medium term and with appropriate rehabilitation efforts, could accelerate a steady growth in the long term. For the tourism sector to recover, a holistic approach is needed that integrates efforts throughout related sectors and builds on the 2015 Post-Disaster Needs Assessment (PDNA) and the National Tourism Strategic Plan 2015–2024.

Under an overarching strategy to build back more sustainable, inclusive and more disaster resilient tourism than before the earthquake, specific strategies will include:

1. Revival of access to tourism destinations, including restoration of roads and trails, water access, energy access, tourism service infrastructure (e.g., lodging and restaurants), waste management system and protection of undamaged infrastructure;
2. Restoration of livelihoods that depend on tourism, including micro, small, and medium sized enterprises, employment opportunities and backward linkages, while enhancing business responsibility towards the environment and strengthening social and gender inclusion;
3. Building a more sustainable tourism for Nepal by strengthening destinations, tourism products and services and promotion.

Current status of ongoing recovery efforts in the sector

In the immediate aftermath of the earthquake efforts were focused on assessment of tourism infrastructure (e.g., roads, trails, lodges and restaurants) and rapid recovery of areas that sustained minor damages. The majority of tourism destinations across the country were declared safe well in advance of the autumn tourist season from October to December 2015, including the key destinations Annapurna and Everest.

Recovery activities to date have focused largely on restoration of access routes and trekking trails across the 11 most affected districts, as well as revival of the image of Nepal as a safe destination through promotional efforts. Tourism recovery is linked to a number of related sectors (including agriculture, employment and livelihoods, social protection, housing, settlements and community infrastructure, commerce and industry, water, sanitation and hygiene) and benefits from cross-cutting rehabilitation efforts. For instance, restoration of tourism routes and trails is supported through ongoing employment and livelihood programmes, largely through cash and food for work modalities, and restoration of some key tourist attractions is supported through cultural heritage renovation and recovery programmes. Ongoing development initiatives are supporting initial steps towards a ‘safe trekking system’ through piloting shelter provision and communication coverage along the trails, including signage.

However, focus on revival of livelihoods based on tourism has thus far been limited, which is a clear gap in the ongoing recovery. For instance, little effort thus far has gone into supporting the private tourism sector. Though many tourism entrepreneurs have found their own ways to rebuild their business –either restoring their damaged properties or building makeshift structures to get back into business and restore their livelihood and that of their families and employees –these are in many cases only temporary solutions. Some of these entrepreneurs have embraced the risks that come with loans, as they project a positive outlook on tourism recovery. However, the majority of rural entrepreneurs do not qualify for a loan. Moreover, livelihood rehabilitation support to the

most vulnerable groups in the tourism sector (micro and small entrepreneurs and labourers in rural destinations) has been negligible thus far.

Expected sector results and indicators

As outlined above and in the following section, achievement of sector results is focused on three areas: restored access to tourist areas and sites; restored livelihoods; and sustainable tourism. These require support and financing from both the public and private sectors.

Access: To attain recovery of tourism in affected areas and beyond, the rehabilitation, repair and reinforcement of trekking trails and bridges will be undertaken; new water sources are to be identified or existing sources sustained. Basic guesthouse infrastructure is to be restored and a Safe Trekking System (see below) will be piloted.

Livelihoods: To enable tourism entrepreneurs and homestays to build back better, their access to soft loans and/or grants is necessary. Development of targeted tours and tourism packages are required to restore tourist confidence and attract renewed tourism. Vocational training and capacity-building courses relevant to the hospitality and tourism industries will be increased.

Sustainable tourism: Restoration of damaged tourism infrastructure and protection of undamaged infrastructure must ensure disaster resilience of tourism destinations and heritage sites. In the longer-term, consistent quality standards must be applied across the tourism sector; systematic and market-segmented promotions are to be developed and emerging tourism streams strengthened, such as cycling and rock-climbing.

Priority recovery programmes

Recovery of tourism includes two aspects: (1) recovery of tourism in the earthquake-affected districts, and (2) recovery of tourism overall in the country. The priority programmes build on the PDNA and the objectives of the National Tourism Strategic Plan 2015–2024 and identify integrated efforts for collaboration with other sectors under the rehabilitation framework.

Tourism specific programmes:

1. Reviving access:

- Infrastructure that should be prioritised includes the access routes (trekking trails and bridges), sustainable water sources and basic guesthouse infrastructure (lodges, tea houses and homestays). Trail rehabilitation efforts should build on existing collaborations with government and tourism industry partners. Langtang and Helambu are prioritised by the Department of Tourism followed by Manaslu, Rolwaling, Dhading and Nuwakot. In addition, non-damaged trails should be assessed and reinforced where needed in preparation for potential future disasters.
- Build on initial pilot activities towards a Safe Trekking System positioning trail standards across the country, including communication coverage throughout the areas/trails, a monitoring system that captures movement of visitors and staff along a trail, rescue procedures and management, shelter provision at each daily section of a trail, enterprises built and operating according to safety standards and infrastructure, and resources built and operated according to safety standards.
- Establish an online platform for TIMS permit information and application that will make the permit system more accessible and time efficient.

2. Restoring livelihoods:

- Tap into the rehabilitation of the country as a tourism product, by developing targeted tours showcasing the unique socio-cultural strengths and living heritage of Nepal that were revealed or perhaps re-emerged after the earthquake.
- Develop access to subsidies, soft loans and grants for tourism entrepreneurs that will allow them to build their business infrastructure back with favourable conditions. Through this means, stimulating e.g., solar energy, sustainable and (earthquake) resilient building materials, improved cook stoves and unique cultural building styles can encourage environmental and cultural quality standards in the destination.
- Give special attention in subsidies, soft loans and grants programmes to recovery of homestays. As an informal sector, homestay providers are at risk of falling under the radar of reconstruction activities. A private sector business chamber can develop a platform for homestay providers to register and provide details on the damages suffered, recovery needs and also the services they will offer when fully functional.
- Identify existing tourism sites in the earthquake-affected areas and, where safety has been restored, develop tourism packages to attract internal and external tourists. As a part of the packages, provide necessary support to the local communities to be prepared to provide good services to tourists.
- Coordinate with training institutes to design capacity building programmes for producing skilled labour for the tourism sector in hospitality, sanitation and hygiene, and interpretation. These programmes should break through the commonly used short-term training approach, which has proven ineffective. Targeted groups require a more comprehensive vocational training package with sustainable guidance and coaching over a longer period of time.
- Develop programmes to attract young people to train and develop their career in the tourism sector; providing scholarships and internship opportunities.

3. Building a more sustainable tourism:

- Strengthen emerging tourism products and destinations, such as cycling and rock climbing.
- Bring quality standards across tourism services.
- Targeted promotion to key market segments utilising niche brands of distinct destinations and products. This will include segmentation of the domestic, Indian and Chinese markets.
- Strengthen the relation between heritage and tourism through improved management towards more sustainable tourism at heritage sites.
- Enhance protection of undamaged tourism infrastructure across the country, considering potential natural disaster and climate change effects.

Implementation strategy and risk analysis

It is evident that implementation of the above strategies and programmes requires a strong understanding between the private and public sector and cannot be accomplished in isolation.

Implementing partners can include:

- Public: The Ministry of Culture, Tourism and Civil Aviation, the Ministry of Finance, the Ministry of Education, tourism officers at the District Development Committee (DDC) level and the Department of Local Infrastructure, Development and Agricultural Roads.
- Autonomous platforms: The Nepal Tourism Board and the National Trust for Nature Conservation
- Private: business associations and business chambers
- Development partners: Samarth the Nepal Market Development Programme, the Great Himalaya Trail Nepal Alliance, the World Wildlife Fund, Oxfam, UN Habitat and the United Nations Development Programme (UNDP)

As tourism is a highly cross-cutting rehabilitation sector, it is crucial to establish collaboration with related sectors to address cross-cutting issues in implementation.

Recommendations to address/mitigate implementation issues and challenges that can emerge:

- Though physical damages to the tourism sector are concentrated in 11 districts, all other destinations across the country are suffering from the overall steep decrease in tourist arrivals to the country. The swift revival of tourism requires targeted marketing of niche products and activities, including the rehabilitation of the country itself, to specific market segments.
- Tourism can only revive sustainably if it is developed from the ground up, ensuring that communities have leadership of their tourism development.
- The rehabilitation of tourism should be backed by related sectors ensuring an integrated approach that will pave a sustainable pathway for this highly cross-cutting sector.

Financial requirements and planning

In general, it has been identified that there is a large interest from donors in providing funding for the reconstruction of the tourism sector. These parties recognise the important role that tourism plays in the Nepalese economy in terms of business and employment generation as well as backward linkages through the value chain. They may also recognise the role tourism can play in rapid recovery of livelihood, while building back more sustainable, inclusive and more disaster resilient communities.

At the same time, developing tourism properly and sustainably will require time and investment, within a holistic planning perspective. The important role of the (rural and urban) private sector and their investment limitations due to the loss they have had and still are experiencing has to be taken into consideration. It is vital to rebuild the image of Nepal as a safe destination immediately towards restoring tourism across the country. However, for some destinations that have suffered major physical damages, the rehabilitation process should be allowed to take time to ensure long-term sustainability.

Financial requirements for recovery and rehabilitation of the tourism sector are calculated at NPR 917.7 million for the five-year plan period. Of that amount, 37 per cent of finances are required for Year 1 and 34 per cent for Year 2. Early restoration and rehabilitation of sector infrastructure and provision of support to entrepreneurs is essential for recovery of the sector and for its role as a core source of revenues and national economic activity. These must be backed up by investment in capacities and skills of human resources working in the sector, in improving standards, in tourism promotion, instituting the Safe Trekking System and in development of the Tourism Information Management System to track progress in the tourism sector.

Sources

Ministry of Culture, Tourism and Civil Aviation (2015) Nepal Tourism Statistics 2014

World Travel and Tourism Council (2015) Travel and Tourism Economic Impact 2015 Nepal

Tourism

TABLE: FINANCIAL REQUIREMENTS FOR PRIORITY RECOVERY PROGRAMME

	Year	2016	2017	2018	2019	2020	Total
	Budget in Million NPR	338.0	313.0	144.3	66.0	56.0	917.3
Program							
Rehabilitation of Manaslu community/trekking trails - phase 2 (significant work done on several sections in 2015, pilot trek opened, 4.5 million spent already, several sections remaining to be done)		25.0					25.0
Rehabilitation of Langtang community/trekking trails (work to start; site visit and estimate done but awaiting procurement)		25.0	25.0				50.0
Rehabilitation of Helambu community/trekking trails		25.0	25.0				50.0
Rehabilitation of Makalu Barun community/trekking trails		25.0	25.0				50.0
Rehabilitation of Tsho Rolpa community/trekking trails		25.0	25.0				50.0
Safe Trekking System		16.0	16.0	16.0	16.0	16.0	80.0
Online platform for TIMS permit information and application		2.5	2.5				5.0
Development and promotion of rehabilitation tours showcasing the unique socio-cultural strengths and living heritage of Nepal		7.5	7.5				15.0
Subsidies, soft loans and grants with favorable conditions for tourism entrepreneurs		66.7	66.7	66.7			200.0
Special subsidies, soft loans and grants for homestay owners		6.7	6.7	6.7			20.0
Promote rehabilitated tourism destinations to niche markets		5.0	5.0	5.0	5.0	5.0	25.0
Long term capacity building programmes for producing skilled labor force for the tourism sector in hospitality, sanitation and hygiene, interpretation. Also business development and management. Special emphasis on youth and women.		20.0	20.0	20.0	20.0	20.0	100.0
Strengthen emerging tourism products to enhance diversification		10.0	10.0	10.0	10.0		40.0
Bring quality standards across tourism services		5.0	5.0	5.0	5.0	5.0	25.0
Segmentation of and targeted marketing to the domestic, Indian and Chinese markets		5.0	5.0	5.0			15.0
Tourism Recovery: Image Re-building for Chinese tourists		18.7	18.7				37.3

Improved management towards more sustainable tourism at heritage sites	10.0	10.0	10.0	10.0	10.0	50.0
Reinforcement of all community/trekking trails, starting with Annapurna and Everest	40.0	40.0				80.0



INFRASTRUCTURE SECTORS

Electricity & Renewable Energy

Transport, Access and Communication

Water & Sanitation



Sector Action Plan (SAP)

Electricity and Renewable Energy

Post-Disaster Recovery Framework, 2073



May 2016

ELECTRICITY AND RENEWABLE ENERGY

1. Situation Analysis

The earthquake caused major damage to electricity generation facilities, both on- grid and off- grid, and to the transmission and distribution networks. A total of some 115 MW of existing large, small and mini hydropower facilities of both the Nepal Electricity Authority (NEA) and independent power producers (IPP), out of a total of 787 MW total installed capacity in the country were severely damaged, with 60MW partially damaged. Furthermore, about 1,000 MW of hydropower projects under construction by NEA and IPPs were partially damaged. For the transmission system, 7 substations and 5 transmission lines were damaged, but all the affected transmission substations were restored within a short period of time with the assistance of officials from Power Grid Corporation of India, and all 42 substations and 57 transmission lines are back in operation. On the distribution side, about 800 km of distribution lines at different voltage levels (33 kV, 11 kV and 400 V) and 365 transformers at different capacity (from 15 to 300 kVA) were damaged and taken out of service. In terms of off-grid electricity services, 290 micro-hydro plants (MHP) with 6.5 MW of installed capacity, 116,000 solar home systems (SHS) and/or small solar home systems (SSHS), and 160 institutional solar PV systems (ISPS)/ solar PV water pumping systems (PVPS) were damaged.

The total cost of the aforementioned physical damage amounts to approximately NPR 17,807 million, including NPR 5,575 million for public sector assets and NPR 12,231 million for private property. About 603,000 households lost access to electricity services, due either to damage of the electricity supply facilities or collapse of their houses. This poses a serious challenge to the Government of Nepal's goal of universal access to modern energy services by 2030. The loss of generation capacity and limited transmission capacity for electricity imports from India has led to a predictable increase in load-shedding hours for consumers with access to grid electricity.

2. Strategic Recovery Vision for the sector

The recovery of electricity in grid and off-grid could be achieved through alternate sources of electricity supply, most commonly with the import of electricity from India, DG sets, or roof-top solar panels. The following initiatives are suggested for recovery in the short, medium and long term:

- Short-term measures include a reduction in load shedding and distribution of small solar home systems (SSHS)/solar lanterns to affected households, repair and maintenance of partially damaged power plants, transmission lines and distribution lines.

- Medium-term measures include the timely completion of hydropower projects that are at an advanced stage, and completion of the ongoing cross-border transmission line that will facilitate additional imports of electricity from India.
- Long-term measures include the construction of new hydropower plants and reconstruction of those that have been damaged.

3. Current status of ongoing recovery efforts in the sector

As mentioned above, repair of damage to the distribution network was initiated on May 2, 2015, shortly after the earthquake, by NEA with technical and financial support from the Government of India through the Power Grid Company of India. Table 1 below presents a summary of the distribution line reinforcement work, worth NPR 324.05 million, completed within fiscal year 2015. The six regional offices listed in Table 1 encompass all of the 31 earthquake-affected districts.

Table 1: Repair of earthquake-damaged distribution lines

<i>Project Name</i>	<i>District</i>	<i>Start Date</i>	<i>End Date</i>	<i>Total Program Cost</i>
<i>Name and/or short description</i>		<i>dd/mm/yyyy</i>	<i>dd/mm/yyyy</i>	<i>Million NPR</i>
Distribution Line Reinforcement Work	Kathmandu Regional Office	2/5/2015	16/07/2015	108.19
Distribution Line Reinforcement Work	Hetauda Regional Office	2/5/2015	16/07/2015	35.80
Distribution Line Reinforcement Work	Pokhara Regional Office	2/5/2015	16/07/2015	21.10
Distribution Line Reinforcement Work	Butwal Regional Office	2/5/2015	16/07/2015	59.78
Distribution Line Reinforcement Work	Janakpur Regional Office	2/5/2015	16/07/2015	55.99
Distribution Line Reinforcement Work	Biratnagar Regional Office	2/5/2015	16/07/2015	43.19
			Grand Total	324.05

Table 2 below provides an overview of fully funded initiatives of NPR 1.22 billion (of which about 773 million NPR funded from DFID and the rest from GoN) completed or currently under implementation by the Alternative Energy Promotion Centre (AEPC) to restore modern energy services to affected populations. Delivery of 11,640 SSSHS, 240 solar mobile charging stations and 200 solar camp lights to earthquake affected areas was initiated shortly after the earthquake and completed within fiscal year 2015. Delivery of additional SSSHS, portable metallic rocket stoves,

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ISPS; rehabilitation of a number of damaged pico, micro and mini-hydro plants and improved water mills; and reconstruction of a number of damaged biogas plants is expected to be completed within fiscal year 2015/16 with resources from the Government of Nepal and DFID.

Table 2: Off-grid projects with committed resources

Project Name	District	Start Date	End Date	Total Program Cost	Source(s) of Funding
Name and/or short description		dd/mm/yy yy	dd/mm/yy yy	Million NPR	Funding Agency
Small Solar Home Systems for earthquake affected households	14 most severely affected districts	17/07/2015	16/07/2016	630	DFID + GoN
Portable metallic rocket stoves for earthquake affected households	14 most severely affected districts	17/07/2015	16/07/2016	210	DFID + GoN
Institutional solar photovoltaic systems for earthquake affected institutions	14 most severely affected districts	17/07/2015	16/07/2016	60	DFID + GoN
Rehabilitation of pico, micro, mini hydropower projects and improved water mills damaged by earthquake	All applicable districts	17/07/2015	16/07/2016	100	DFID + GoN
Reconstruction of earthquake damaged biogas plants	All applicable districts	17/07/2015	16/07/2016	149.5	DFID + GoN
11,640 SSHS for earthquake affected households	10 districts	1/5/2015	16/07/2015	54.518	GoN
240 Solar PV-powered mobile charging stations	13 districts	1/5/2015	16/07/2015	10.355	GoN
200 Solar PV-powered camp lights	Kathmandu, Lalitpur, Bhakpatur	1/5/2015	16/07/2015	6.102	GoN
			Grand Total	1,220.48	

Although repair of the distribution lines in all 31 affected districts was initiated and completed within fiscal year 2014/15 as indicated in Table 1, additional damage to the transmission and distribution networks were subsequently identified after thorough examination of the facilities. Considerable work remains to be done to reconstruct and expand distribution lines, replace damaged poles, meters and transformers. Similarly, substantial damage was sustained to substation infrastructure and NEA's physical infrastructure, such as buildings and boundary walls, and these facilities remain in need of reconstruction.

4. Expected sector results and indicators

According to available sector results and indicators, NEA has compiled the total cost of physical damage in distribution lines and substation within 31 districts is presented in Table 3.

Table 3: Summary of cost of physical damage

Project Name							
	Name and/or short description	Severely Hit	Crisis Hit	Heavily Hit	Hit	Slightly Hit	Total cost in million NPR
A	Distribution Lines						
1	Reconstruction and expansion of 33 kV line	591.084			3.276	0.936	595.30
2	Reconstruction and expansion of 11 kV line	769.084	208.299			16.380	993.76
3	Reconstruction and expansion of 0.4 kV line	1597.440	523.536		10.920	27.456	2159.35
4	Replacing of single phase meter	379.384	165.180	0.015	0.312	0.015	544.91
5	Replacing of three phase meter	23.056	7.312				30.37
6	Replacing of damaged HT poles	618.735	182.390	62.400	4.745	7.117	875.39
7	Replacing of damaged LT poles	11.606	70.761		17.139	9.048	108.56
8	Replacing of damaged 33/0.4 kV Distribution Transformers						
	25 kVA						
	50 kVA					0.100	0.10
	100 kVA				1.300		1.30
9	Replacing of damaged 11/0.4 kV 15 kVA Distribution Transformers	5.400	2.000	0.600		0.100	8.10
10	Replacing of damaged 11/0.4 kV Distribution Transformers						
	25 kVA	13.200	5.400	2.100	1.800	2.100	24.60
	50 kVA	23.500	13.500	6.000	4.500	0.750	48.25
	100 kVA	14.400	31.200	5.600	2.400		53.60
	150 kVA						
	200 kVA	9.000	43.500	3.000			55.50
	250 kVA						
	300 kVA		2.000				2.00
B	Substations						
1	Replacing of damaged 33/11 kV Power Transformer						
	6/8 MVA						
	3 MVA	26.000					26.00
2	Replacing of damaged 33 kV Circuit Breaker						
3	Replacing of damaged 12 kV Switchgear		8.320				8.32
4	Replacing of damaged 33 kV Disconnecting Switch	7.800					7.80
5	Replacing of damaged 33 kV Relay and Control Panel						

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6	Replacing of damaged Current Transformer	1.560					1.56
7	Replacing of damaged Voltage Transformer						
	Replacing of damaged Lightening Arrester	29.835	1.950				31.79
8	Replacing of damaged Battery and Charger			1.040			1.04
C	Physical Infrastructure						
1	Reconstruction of Office Building	159.968	195.720	122.322	66.600	10.980	555.59
2	Reconstruction of Store Building	48.018	75.360	58.800	72.000	3.600	257.78
3	Reconstruction of Staff Quarter Building	414.069	68.400	159.655	672.240	0.12	1314.49
4	Reconstruction of Control Building of S/S	173.268	4.800	63.657		5.520	247.25
5	Reconstruction of Security Guard Building of S/S				0.120	0.120	0.24
6	Reconstruction of Boundary Walls and others						
7	Reconstruction of SamudaikSikchaJalvidyut Pvt. Ltd.						
	Civil Works					6.300	6.30
	Electro-Mechanical Works					1.700	1.70
	Total						8689.74

5. Priority Recovery Programmes

NEA has prioritized recovery efforts by categorizing each of the 31 affected districts by the level of damage sustained to its infrastructure in those districts as displayed in Table 4 below. The categories are: severely hit, crisis hit, hit with heavy losses, hit, and slightly hit.

Table 4: Categorization of affected districts

Severely Hit	Crisis Hit	Hit with Heavy Losses	Hit	Slightly Hit
Sindhupalchowk	Kavrepalanchowk	Lamjung	Kaski	Nawalparasi
Dolakha	Kathmandu	Tannahu	Parbat	Arghakhachi
Rasuwa	Lalitpur	Chitawan	Syangja	Myagdi
Gorkha	Bhaktapur	Solukhumbu	Gulmi	Sankhuwasabha
Nuwakot	Makawanpur	Khotang	Palpa	Bhojpur
Dhading	Sindhuli		Baglung	Dhankuta
Ramechhap	Okhaldhunga			

Sequencing of priority recovery programmes will be executed according to this categorisation, with activities in the most severely-affected districts being initiated first.

6. Implementation strategy and risk analysis

The bulk of the recovery work on grid infrastructure consists of reconstruction of damaged infrastructure and replacement of damaged equipment, both requiring adherence to public procurement rules and procedures. Contractor or vendor selection is expected to take at least a year,

and therefore the disbursement schedule for these priority programmes is structured so that 15% of the cost of each programme is required in the first year of the programme as a mobilisation advance due to the contractors/vendors. Each programme is expected to be completed in the following two years, for each of which 42.5% of the total programme cost is allocated. ***No budget has been allocated by the Government for any of these programmes, nor have any development partners earmarked funds for these programmes.***

NEA is already suffering from a shortage of both human and financial resources. Therefore, in addition to the financial requirements for the above-mentioned priority programmes, funds will also be needed for the administration of the priority recovery programmes, particularly for the establishment of a project implementation unit, and for specialised expertise in the form of external consultants where necessary. ***The financing requirement for such operating expenses is estimated at NPR 168 million over 5 years, and this incremental cost remains unfunded at the moment.***

For off-grid electricity, due to the modest size of each individual facility to be addressed by AEPC's proposed programmes, additional lead time for procurement is anticipated to be shorter than in the case of the NEA programmes, though AEPC also needs to follow the public procurement rules and procedures and each programme is expected to be completed in two years, with the budget for each programme distributed evenly between the 2-year implementation period. While DFID provided resources for AEPC to implement the programmes described in Table 2, ***neither the Government nor any development partners has yet committed resources to implement the priority programmes listed in Table 6 below.***

7. Financial requirements and planning

As presented in Table 5 below, the total financial requirement to implement NEA's priority programmes is NPR 9 billion over 5 years. Reconstruction activities for the severely-hit districts have been split into 2 phases (starting with three of the districts first, and then the remaining four in the following year) due to the large amount of funding required and limitations in NEA's implementation and disbursement capacity. In addition to NEA's regular system, there is distribution network that falls under its Community Rural Electrification Department (CRED). This refers to service areas where the grid has been extended, largely through funds from the Government (and about 10% from the community). In these areas, NEA sells electricity in bulk to a community cooperative that manages retail distribution. The funding required to repair damaged infrastructure, mainly replacement of damaged poles and transformers, is not disaggregated by district and is listed separately in Table 5.

Table 5: Priority programmes and financial requirements

<i>Program</i>	<i>Start date</i>	<i>FY 2017 +</i>	<i>FY 2018</i>	<i>FY 2019</i>	<i>FY 2020</i>	<i>FY 2021</i>	<i>Total Program Cost</i>
		<i>Million NPR</i>	<i>Million NPR</i>	<i>Million NPR</i>	<i>Million NPR</i>	<i>Million NPR</i>	<i>Million NPR</i>
TOTAL PROGRAM COSTS		602	2,185	3,406	2,198	615	9,007
Severely Hit (1st Phase)	16/07/2017	539	1,527	1,527			3,593
Severely Hit (2nd Phase)	16/07/2018		304	862	862		2,027
Crisis Hit	16/07/2018		243	690	690		1,623
Heavy Hit	16/07/2019			74	210	210	494
Hit	16/07/2019			129	364	364	858
Slightly Hit	16/07/2019			14	40	40	95
CRED	16/07/2017	63.4	110.95	110.95	31.7		317

Note: CRED = Community Rural Electrification Department.

For off-grid electricity and renewable energy services, going forward, AEPC has proposed 8 priority recovery programmes, with a financing requirement of NPR 6.02 billion, as presented in Table 6 below. These programmes include delivery of new SSHS and portable metallic rocket stoves to earthquake affected households, and new ISPS and institutional metallic stoves to earthquake-affected institutions. Also included are rehabilitation of pico, micro and mini-hydro, and improved water mill projects, and micro/small/medium enterprises damaged by the earthquake. Finally, reconstruction of damaged biogas plants, ISPS, and solar PV water pumping system (PVPS) facilities constitute the remainder of the priority programmes. All of these programmes will build on and are additional to the projects completed in fiscal year 2016/17 and 2017/18 as described in Table 2.

Table 6: Financial requirements for off-grid priority recovery programmes

<i>Programme</i>	<i>Start date</i>	<i>FY 2016/17</i>	<i>FY 2017/18</i>	<i>Total Program Cost</i>
		<i>Million NPR</i>	<i>Million NPR</i>	<i>Million NPR</i>
TOTAL PROGRAMME COSTS		3,011	3,011	6,022
Small Solar Home Systems for earthquake affected households	16/07/2016	1,258	1,258	2,516
Portable metallic rocket stoves for earthquake affected households	16/07/2016	500	500	1,000
Institutional solar photovoltaic systems for earthquake affected institutions (e.g., public schools, health posts, health centers, VDC offices etc.)	16/07/2016	250	250	500
Rehabilitation of pico, micro, mini hydropower projects and improved water mills damaged by earthquake	16/07/2016	450	450	900

Reconstruction of earthquake damaged biogas plants	16/07/2016	358	358	717
Institutional metallic stoves for earthquake affected institutions	16/07/2016	5	5	10
Reconstruction of damaged ISPS/solar PV water pumping system (PVPS) projects	16/07/2016	26	26	51
Rehabilitation of micro small and medium enterprises (MSMEs) damaged by earthquake	16/07/2016	21	21	42
Programme management cost	16/07/2016	143	143	286

While the PDNA estimates damage to private electricity and renewable energy assets at NPR 12,231 million, the Government has not indicated an intention to provide budgetary support for the rehabilitation of damaged private hydropower infrastructure to date, indicating that private ventures should have sufficient insurance protection and should be able to mobilise other resources to address their recovery needs. Independent power producers are lobbying the Government to extend the tenure of their power purchase agreements with NEA in lieu of providing direct support for reconstruction.

Electricity and Renewable Energy

TABLE: FINANCIAL REQUIREMENTS FOR PRIORITY RECOVERY PROGRAMME

	Year	2016	2017	2018	2019	2020	Total
	Budget in Million NPR	3,612.9	5,195.9	3,406.0	2,198.0	615.0	15,028.9
Program							
Electricity							
	Budget in Million NPR (Electricity)	602.0	2,185.0	3,406.0	2,198.0	615.0	9,007.0
Severely Hit (1st Phase)		539.0	1,527.0	1,527.0			3,593.0
Severely Hit (2nd Phase)			304.0	862.0	862.0		2,027.0
Crisis Hit			243.0	690.0	690.0		1,623.0
Heavy Hit				74.0	210.0	210.0	494.0
Hit				129.0	364.0	364.0	858.0
Slightly Hit				14.0	40.0	40.0	95.0
CRED		63.4	111.0	111.0	31.7		317.0
Renewable Energy							
	Budget in Million NPR (Renewable Energy)	3,010.9	3,010.9				6,021.9
Small Solar Home Systems for earthquake affected households		1,257.8	1,257.8				2,515.5
Portable metallic rocket stoves for earthquake affected households		500.0	500.0				1,000.0
Institutional solar photovoltaic systems for earthquake affected institutions (e.g., public schools, health posts, health centers, VDC offices etc.)		250.0	250.0				500.0
Rehabilitation of pico, micro, mini hydropower projects and improved water mills damaged by earthquake		450.0	450.0				900.0

Reconstruction of earthquake damaged biogas plants	358.3	358.3	716.6
Institutional metallic stoves for earthquake affected institutions	5.0	5.0	10.0
Reconstruction of damaged solar water pumping (PVPS) projects	25.5	25.5	51.0
Rehabilitation of micro small and medium enterprises (MSMEs) damaged by earthquake	21.0	21.0	42.0
Program Management Cost	143.4	143.4	286.8

Sector Action Plan (SAP)

TRANSPORT

Post-Disaster Recovery Framework, 2073



May 2016

TRANSPORT

Section 1. Situation Analysis

1. Nepal has about 14,902 km of the strategic road network (SRN), the core network of national highways and feeder roads connecting district headquarters. About 51% of SRN is paved, 13% is graveled and 36% is earthen. The Local Roads Network (LRN) is close to about 53,000 km. About 3% of the LRN is black-topped, about 68% earthen and the remaining 29% is graveled¹⁸ LRN comprises two types of road networks: District Road Core Network (DRCN) and Village Road Core Network (VRCN). Road network in the affected 31 districts extends to 5,140 km of SRN and about 29,443 km of LRN. The LRN in the affected districts is critical infrastructure for the rural communities. In the 31 affected districts, SRN extends across 5,140 km while LRN, which is crucial for rural communities, covers about 29,443 km.
2. Based on PDNA, the total estimated damages and losses on SRN are NPR 4,589 million (US\$45.9 million) and NPR 526 million (US\$5.26 million), respectively. Similarly, the estimated damages and losses on LRN are NPR 12,485 million (US\$ 124.85 million) and NPR 4,274 million (US\$42.74 million), respectively. The total damage and loss of transport sector accounts for 3.13% of the total damage and loss. The total cost of the recovery accounts for 4.2% of the total cost of the recovery. The recovery cost details of Civil Aviation have not been included in this report, as it constitutes cost that is not significant.
3. In the case of the transport sector, PDNA findings and subsequent recommendations were based on the guiding principles that include actions of (a) fast track repairs of minor damages and opening of blocked roads in the short term that is within 6 months, (b) In medium term, speedy and efficient construction or rehabilitation of various components of the road using Build Back Better (BBB) principles within 24 months following flexi procurement provision for quick procurement, (c) speedy and effective procurements of long term works using BBB approaches, and (d) improvement of the reliability of the highways, feeder roads, district roads and village roads that may not have been affected by the earthquakes but would constitute a basic access to the more damaged and populated areas. Current assessment suggests that significant progress has been made within this year for opening of the blocked road of SRN but in case of LRN, desirable progress is yet to achieved.

Section 2. Strategic Recovery Vision for the sector

4. The performance of the transport sector is a very significant factor in rolling out the strategy for early recovery from the earthquake. The recovery vision for the transport sector is to ensure that:
 - a. The Build Back Better concept is fully incorporated and internalised in designing the road and rehabilitation/reconstruction of road sections damaged due to earthquake.

¹⁸ DoLIDAR. 2015.

- b. Roads are back in an operational mode with an enhanced characteristic of facilitating the better mobility of goods and services. This will contribute to maintain the transport costs for haulage of goods to an affordable level.
- c. Developed and maintained transport infrastructure is sustainable, resilient to damage and dependable. Particularly to those lifelines of the transport network, it is necessary to develop resiliency by adopting a sound structural defense system. Even in case of failure of one set of structural elements such as retaining structure, the road still holds on with secondary defense provided by reinforced earth, to keep the traffic moving.
- d. Transport infrastructure facilitates the movement of goods and services to the affected area, to support an early start to the recovery/restoration of the damaged infrastructure, including schools, health posts, habitats, for example.

Section 3. Current status of ongoing recovery efforts in the sector

5. The immediate response as outlined in the PDNA, July 2015 was to open roads to traffic by removing blockages. The task as regards SRN was achieved after the opening of Dolalghat – Miterisanghu Road section of Arniko Highway in April 2016. The task is yet to be completed for LRN. Lack of manpower and the limited accessibility of the equipment have so far constrained the progress on removing blockages on affected local roads.
6. The agencies responsible (DoR for SRN and DoLIDAR for LRN) have so far identified the list of roads that were damaged during the earthquake and that were assessed during the PDNA as needing urgent rehabilitation and reconstruction. A detailed estimate for rehabilitation and reconstruction has been prepared, together with the identification of possible funding sources. Cost estimates have also been prepared for the damaged physical properties belonging to the respective institutions that are required for the rehabilitation and reconstruction program.
7. In the SRN sector, commitments for funding have so far been received from the Asian Development Bank (ADB), World Bank (WB) and the Government of China. ADB has pledged NPR 3,100 million for upgrading and reconstruction three roads: Panchkhal Melamchi Road (41 km), Dhading Gorakha Road (46 km) and Dolakha Singati (35 km). WB has pledged NPR 247 million for the reconstruction of the DoR building at Baneshwor. The Government of China has pledged NPR 748 million for the reconstruction of Arniko Highway.
8. For SRN, out of 57 packages identified, 22 packages of various road sections are in a state of readiness for program implementation. The detailed design work for five packages (incl. ADB and WB supported program) has been completed.
9. For rehabilitating and reconstructing local roads, DoLIDAR has identified six program packages a) Rehabilitation and Reconstruction of Roads under EEAP; b) Reconstruction, Rehabilitation and Upgrading of Roads recommended by DDRC /DDC within the PDNA Target; c) Reconstruction, Rehabilitation and Upgrading of Roads additionally recommended by DDRC /DDC d) Construction of motorable bridges for better road linkage on reconstructed and upgraded roads (totaling 89 bridges); e) Capacity development of human resources involved in reconstruction projects and f) Recurrent costs for implementation of Reconstruction, Rehabilitation and Upgrading projects.

Section 4. Expected sector results and indicators

10. The transport sector rehabilitation/reconstruction program is targeted for completion within the next 5 years. The key sector results (outcomes) will be:

- Improved and enhanced road networks in the earthquake affected areas of 31 districts, thereby reducing travel time;
- Enhanced local road networks facilitating access to market, education and health services in 12 EQ affected districts;
- Operationalisation of existing local road networks in 21 additional districts;
- Enhanced capacity of DoR & DoLIDAR to design and manage resilient transport infrastructure; and,
- Additional employment generated.

11. The key measurable indicators would be;

- Annual disbursement published in quarterly monitoring report by the concerned agency;
- Road standards reviewed, developed and operationalised with “Build Back Better” concept;
- 3 bridges constructed and operationalised in SRN by June, 2018
- 89 bridges constructed and operationalised in District Core Road Network by June, 2020;

Section 5. Priority Recovery programmes

12. Overall, a holistic approach to recovery in the transport sector is necessary, as its early recovery (at least opening roads for traffic) helps in supporting other sector activities by saving the considerable time, cost and effort needed in transporting necessary logistics and construction materials to the targeted destination. These recovery processes will be carried out based on the following guiding principles:

i) Good practice, based on learning from the past: In the aftermath of the disaster, it was anticipated that the monsoon would inflict a series of catastrophe on roads, triggering failures on already fractured road slopes. But it did not happen to the scale anticipated. The bio-engineering technique, lately introduced in Nepal for application to cut slopes, has worked successfully in preventing such disasters.

ii) Government-led programs with international support: It will not only help in channeling the fund but also creating a platform for sharing national and international experience in coming up with proven solutions for the effective recovery of the damaged structures.

iii) Strong local participation in each phase of recovery process: To overcome the challenge of ensuring timely implementation, the strong participation of the local stakeholders is very much warranted. This will help to make land available in time and will ensure quick mobilisation of local road-building groups for the rehabilitation and reconstruction of local roads. Local participation will also ensure accountability.

iv) Targeted capacity-building measures: In order to manage and develop road networks effectively and efficiently, it is imperative that adequate attention be given for enhancing institutional capacity. Initiatives should include a review of the existing road standards and specifications, with the objective of creating a sustainable and resilient road system in Nepal.

v) Maintaining priority for social and environmental safeguard compliance; and

vi) Development of an integrated risk reduction mechanism. As part of this, the following principles have been identified to guide project implementation:

- Ensuring financial authority only at the time of signing the contract

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- Proper identification of suitable construction materials and timely authorisation to extract and collect natural construction materials
- Ensuring timely intervention on issues identified during monitoring
- Use of construction materials that meet specifications
- Ensuring timely disbursement of allocated resources.

13. The prioritisation of programmes has been finalised in consultation with stakeholders, including participating development partners. The other criteria that were taken into consideration during the selection of priorities include:

- Area under extensive damage
- Scale of other sector activities
- Strategic importance of the particular road section.

Section 6. Implementation strategy and risk analysis

14. Under the direct policy guidelines from the National Reconstruction Authority (NRA), the respective implementing agencies (DoR for SRN and DoLIDAR for LRN) will implement rehabilitation and reconstruction programs as per the guiding principles stated in this report.

15. For SRN, the overall program will be coordinated from the central office with an SDE ranked coordinator (already in place). In addition, DoR has appointed three key persons to coordinate and implement the reconstruction activities for three ADB-assisted roads. The rest of the implementation will be carried out through the respective Road Division Offices located either in the affected districts or adjacent districts.

16. For LRN, the ADB-supported program will be implemented under the newly-established Earthquake Emergency Assistance Project (EEAP). The rest of the program will be implemented through District Technical Offices under District Development Committees.

17. In the transport sector, the short-term program includes the maintenance and rehabilitation of road sections at specific locations, addressed to:

- Removal of debris
- Minor repairs to drains, culverts, walls, bridges
- Minor back-cutting & filling
- Temporary bridges/crossings
- Reopening of traffic
- Surveys of conditions and risk assessments

18. The medium-term program will focus on the reconstruction and rehabilitation of substantial lengths of road. The program will include:

- Revision of Road Standards and Specifications
- Designs based on BBB and Type of Road
- Procurement planning and award of works

19. The long-term program will focus on the reconstruction of substantial lengths of road. The program will include:

- Designs based on BBB and Type of Road
- Procurement planning and award of works
- Construction
- Procurement Method: Contract, NCB, ICB, LT/LIB

20. Prioritisation is based on the following considerations:

- Restoring lifelines to heavily-affected areas, to support reconstruction activities
 - Restoring the trade route with China
 - Supporting the development of an alternative route to the existing vulnerable routes

 - Restoring local road networks, with emphasis on strengthening the District Road Core Network
21. Road transport being the backbone for creating and consolidating economic and social advancement in the country, the enhanced road system brings sufficient economic returns, thus justifying the investment. Apart from increasing access to the basic services like education, health and markets, the road sector plays a key role in creating additional employment opportunities, as well as creating an environment for people to raise their standard of living.
22. Some issues that may affect the implementation of recovery programs include:
- Timely procurement: Although, for emergency purposes, the bidding period has been reduced by shortening the bid submission period; but if sufficient marketing outreach is not done, there is a danger of receiving unbalanced bids. This could be detrimental to the timely execution of contracted works.
 - Timely compensation: The timely settlement of compensation amounts and payments is very critical in carrying out construction works;
 - Timely availability of construction materials: Speedy clearance from the concerned authorities for the availability of the construction materials is one of the outstanding issues faced by the construction programs.
23. The implementation capacity of DOR for SRN is adequate, given its extensive experience in implementing donor-funded projects. However, the capacities of DDCs, which will be responsible for implementing local and rural road projects, vary from district to district. DoLIDAR's staff base is already overstretched with a large number of scattered projects in a number of districts. The additional volume of design and supervision work needed for recovery works is a heavy burden on DoLIDAR. It is recommended that additional resources, including consultants, should be allocated to DoLIDAR for the project management.
24. It is also recommended that women, dalits and ethnic groups, the most affected by the earthquake, participate in suitable works related to rehabilitation or reconstruction of rural roads. This will require coordination with the concerned agencies in accessing crèche facilities for children, to enable women with children to participate in work and take full benefits.
25. Monitoring and evaluation. The high level of investment and the enormous amount of work to be undertaken in a very limited period, especially in the first 24 months, has increased the risk of fraudulent practices, corruption and compromise with regard to quality. Such practices have been observed in other countries. While there is a limit to the government resources, careful planning of implementation arrangements is required to ensure efficient execution. Creating additional layers of decision-making for the purpose of close monitoring usually does more harm than good, which will further delay the achievement of intended outputs through the recovery operations. Therefore, direct monitoring by the office of the senior decision-makers is a good practice for ensuring prompt and appropriate decision-making and implementation.

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26. Adequate safeguard provisions for gender equality and social inclusion, environmental sustainability and disaster preparedness will be secured in the projects by examining every activity listed in the project document.
27. In order to reduce vulnerability, improve community resilience and the resilience of transport infrastructure, design specifications will be revisited, as far as possible, to take account of these activities as part of the guiding principles adopted in the “build back better” principle.

Section 7. Financial requirements and planning

28. Based on PDNA, the total estimated damages and losses on SRN are NPR 4,589 million (US\$45.9 million) and NPR 526 million (US\$5.26 million), respectively. Similarly, the estimated damages and losses on LRN are NPR 12,485 million (US\$ 124.85 million) and NPR 4,274 million (US\$42.74 million), respectively. The total damage and loss of transport sector accounts for 3.13% of the total damage and loss. The total cost of the recovery accounts for 4.2% of the total cost of the recovery. The recovery cost details of Civil Aviation have not been included in this report, as they do not constitute significant costs.
29. For SRN, 37 road sections of various highways and feeder roads affected due to earthquake in 19 Districts are projected to cost NPR 6,471 million. The total program cost is estimated to be NPR 6,749, which also includes rehabilitation/reconstruction of damaged physical properties with an estimated cost of NPR 278 million. The proposed program has been targeted for completion within the next three years. (see worksheet details).
30. The total program costs for local roads within the targeted 31 districts have been identified as NPR 18176 million. Out of the six programs, one is targeted to be completed within the next three years, two in four years and three in five years. The ADB has pledged NPR 4590 million for the program to be implemented under the Earthquake Emergency Assistance Project (EEAP). The preparation of DPR is in progress.
31. The overall projected demand and proposed disbursement of resources for the rehabilitation and reconstruction of SRN and LRN is given in the following table 1. The financial target for the first year would be 14.74% of the total road sector disbursement.

Table 1. Projected Financial Disbursement

In million NPR	First Year		Second Year		Third Year		Fourth Year		Fifth Year		Total	
	FY 2016/17		FY 2017/18		FY 2018/19		FY 2019/20		FY 2020/21			
Strategic Road Network	2574	38.14%	2358	34.94%	1817	26.92%	-		-		6749	100%
Local Road Network	1100	6.05%	3412	18.77%	5925	32.60%	5659	31.13%	2079	11.44%	18176	100%
Total Cumulative Disbursement	3674	14.74%	5760	23.11%	7742	31.06%	5659	22.07%	2079	8.34%	24925	100%

32. A comparative study of the current estimate for the recovery and the cost estimated during the PDNA is given in the following table 2. The details of priorities and the annual target is given in the annexes (Templates)

Table 2. Comparative assessment of Sector Needs		
	Cost of Recovery (NPR million)	
	Strategic Road Network	Local Network
Projected During PDNA NPR million	9017	18176
Projected during PDRF NPR million	6749	19054
Difference	(-) 2268	(+) 878 million

TRANSPORT (SRN)

TABLE: FINANCIAL REQUIREMENTS FOR PRIORITY RECOVERY PROGRAMME

	Year	2016	2017	2018	2019	2020	Total	On-budget sources	Off-budget sources	Unknown
	Budget in Million NPR	2,574	2,358	1,817	0	0	6,749	1,099	0	5,651
Program										
Panchkhal Melamchi Road (41 km)		500	500	494			1,494	50	940	504
Dhading Gorakha Road (46 km)		600	600	476			1,676	55	1055	566
Dolakha Singati(35 km)		400	475	400			1,275	40	805	430
Other Roads at different locations		55	0	0			55	55		0
Bridges (Bhalam Khola 25m, Khudi Khola 40m, Hanumante Khola 35m)		30	40	30			100		100	0
Araniko Highway		80	80	60			220	220		0
Araniko Highway		250	250	248			748			748
Baglung-Beni-Jomsom		25	25				50	50		0
Lamosangu-Jiri Road		50	55				105	105		0
Charikot-Dolkha Urban Road		10					10	10		0
Tamakosho- Manthali-Khurkot		25	25				50	50		0
Tamakosho- Manthali-Khurkot		30	28				58	58		0
Dolalghat-Chautra Road		20	20				40	40		0
Galchhi-Devighat-Pipaltar		7					7	7		0
Pasanglamhu marga		40	40	33			113	113		0
Gangate-Dhikure-Labhdu-Kharanitar-Samundaratar Road		11					11	11		0
Gorkha Barpak road 48km		30	43				73	73		0
Barpak-Laprak Gumda Road 17 Km		20	20				40	40		0
Benighat-Arughat-Soti Road 58 Km +other Regional Road		20	25				45	45		0
Kaligandaki Corridor (Gaodakot-Ramdi-Beni)		7					7	7		0

Sankhu-Bhotechaur Road	10		10	10	0
Suryabinayak-Pilot Baba	2		2	2	0
Changu Narayan- Duwakot	7		7	7	0
Lubu-Lamatar-Lakuri Bhanjyang	5		5	5	0
Maitighar Singhadarbar Road	2		2	2	0
Kathmandu Vallry Roads damage by the track of heavy equipments during rescue operation	25		25	25	0
Pokhara- Baglung Highway	20		20	20	0
Pokhara- Baglung Highway	20		20		20
Kathmandu Vallry Roads damage by the track of heavy equipments during rescue operation	25		25		25
East West highway(H01)	2		2		2
Tribhuvan Highway	7		7		7
Prithvi Highway	20		20		20
Prithvi Highway	28		28		28
Narayanghat- mugling Road	5		5		5
Banepa-Sindhuli-Bardibas highway	30	43	73		73
Siddhartha Highway	10		10		10
Siddhartha Highway	5		5		5
Abukhaireni-Gorkha	4		4		4
Dumre-Besishahar	5		5		5
Kanti Highway			0		0
Hetada Bhainse	6		6		6
Bhainse Bhimphe			0		0
Bhaimphedi Khulekhani	3		3		3
Khulekhani Chhaimaile			0		0
Chhaimaile-Dakshinkali	4		4		4
Sitapaila Bhimdhunga	3		3		3
Balaju Bipass	3		3		3
Simaltari -Pyutahan Road	5		5		5

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Physical Properties				0	0
Physical Property Damages -Buildings				0	0
DOR Head Office Babarmahal	80	90	77	247	247
Regional Directorate Pokhara	1			1	1
Mechanical Training Centre Chakupat	1			1	1
Central Lab Chakupat	0			0	0
DRO Lalitpur	4			4	4
DRO Nuwakot	11			11	11
DRO Jankpur	2			2	2
DRO Khurkot	4			4	4
DRO Hetauda	9			9	9

TRANSPORT (LRN)

TABLE: FINANCIAL REQUIREMENTS FOR PRIORITY RECOVERY PROGRAMME

	Year	2016	2017	2018	2019	2020	Total	On-budget sources	Off-budget sources	Unknown
Budget in Million NPR		1,100	3,412	5,925	5,659	2,079	18,176	-	2,079	16,096
Program										
Rehabilitation and Reconstruction of Roads under Earthquake Emergency Assistance Project (EEAP)		513	1,198	1,198	684		3,594	-		3,594
Reconstruction , Rehabilitation and Upgrading of Roads recommended by DDRC /DDC within PDNA Target		335	1,006	2,347	2,347	671	6,706	-		6,706
Reconstruction ,Rehabilitation and Upgrading of Roads additionally recommended by DDRC /DDC			238	832	951	357	2,377	-		2,377
Construction of motorable bridge for better road linkage in reconstructed and upgrading road (89 nos Bridge)			601	1,202	1,402	801	4,005	-		4,005
Capacity development of human resources involve in reconstruction project		48	166	143	71	48	475	-		475

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Recurrent cost for implementation of Reconstruction, Rehabilitation and Upgrading projects	204	204	204	204	204	1,019	-	1,019
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Sector Action Plan (SAP)

Water, Sanitation and Hygiene

Post-Disaster Recovery Framework, 2073



May 2016

WATER, SANITATION AND HYGIENE

1. Situation Analysis

Assessment of existing and current information

Following the earthquakes on 25 April 2015 and 12 May 2015, the PDNA report published in June 2015 estimated that out of a total 11,288 water supply systems in the 14 most affected districts, 1,570 sustained major damage, 3,663 were partially damaged, while approximately 220,000 toilets were partially or totally destroyed.

Additionally, out of a total 16,433 water supply systems in the other 17 moderately-affected districts, 747 sustained major damage, 1,761 were partially damaged and approximately 168,000 toilets were partially or totally destroyed.

Overall, a total of 28% of the water supply schemes were impacted: 8% with major damage and 20% with partial damage in the 31 earthquake-affected districts.

It was also estimated that about 25% of households in the 31 districts lost their toilets. Of the damaged water supply schemes, 90% are in rural areas. In addition, 6 district buildings of the Department of Water Supply and Sewerage (DWSS) and some buildings of Kathmandu Upatyaka Khanepani Limited (KUKL) in the Kathmandu Valley collapsed, A further 47 DWSS office buildings suffered partial damage in the affected 31 districts.

2. Strategic recovery vision

The WASH sub-sector aims to ensure, by 2021, the provision of resilient and equitable WASH services to the affected people of the 31 earthquake-affected districts, thereby contributing to the national target for water supply, sanitation and hygiene and to the Sustainable Development Goals.

3. Current status of recovery efforts

The PDNA estimates of damage and losses were made on the basis of an initial rapid assessment of the water supply schemes and sanitation facilities. Since then, a number of districts have been conducting further assessments of condition of WASH services, so as to identify short- and long-term reconstruction support requirements. However these assessments will take further time to

complete. Thus, for the purposes of the current PDRF planning and until further updates are received, the estimates made during the PDNA process are taken as reference points for preparing the PDRF plans and programmes. The PDNA estimated a total requirement of 181 million USD for recovery and reconstruction in the WASH sector, which are further elaborated in section 7 below (Financial requirements and planning).

4. Expected sector results and indicators

Recovery objectives:

The key recovery objective of the WASH sub-sector is to restore equitable WASH services through reconstruction of disaster-resilient WASH facilities, while increasing resilience capacities of communities, service providers and stakeholders, while further enhancing sector coordination and accountability. The specific objectives are:

- Ensure disaster-resilient water supply, sanitation and hygiene facilities at the community and institutional levels.
- Assess and develop human resource capacities with regard to disaster resilience of communities, service providers and implementing stakeholders
- Strengthen institutional capacities and monitoring systems for resilient WASH services.
- Promote innovative technologies and approaches for disaster-resilient WASH services

SECTOR RESULTS AND RELATED INDICATORS

- The PDNA report proposed key sector indicators to be achieved by the end of the long-term programme. On the basis of the review of the PDNA indicators, the following sector results are expected to be attained by the end of the 5-year programme, as follows:

Priority Recovery Needs	Interventions	Expected Outputs	Intended Outcomes
Provision of water in communities, camps and resettlement areas	Repair and reconstruction of partially and completely-damaged water systems through resilience building	# of water systems restored/reconstructed through resilience building	# of people having access to basic drinking water in communities, camps and resettled areas

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Provision of sanitation and hygiene services in communities, camps and resettlement areas	Encourage and support households to rebuild toilets and hand-washing facilities through promotion, education and community mobilization	# of toilets and hand-washing facilities rebuilt by households and communities	# of people having access to basic sanitation and hand-washing facilities in communities, camps and resettlement areas
Institutional and Public places with child, gender and disabled (CGD) friendly WASH services is ensured in the affected districts	Repair and reconstruction of institutional CGD-friendly WASH facilities (schools, health posts and public places) in collaboration with sector line agencies	# of institutions and public places with CGD- friendly wash facilities restored or reconstructed	# of people accessing CGD-friendly WASH facilities in institutions and public places
WASH stakeholders capacitated and institutions strengthened to ensure resilient WASH services and DRR	Capacity-building of WASH stakeholders at national, district and village levels conducted about resilient WASH and DRR	# of stakeholders participating in capacity- building and institutional development for resilient WASH and DRR	# of agencies integrating resilient WASH and DRR into WASH reconstruction programs

5. Priority recovery programmes

Short-term project activities (by July 2017) will build on the ongoing emergency recovery projects and other committed projects through fiscal year 2016/17, giving priority to: temporary or provisional repairs and basic rehabilitation of water systems; addressing the drying up of water sources due to earthquakes; water source protection; rebuilding of toilets and hand-washing facilities; resumption of the ODF campaign; WASH support to the existing camps and shelters, and to new relocated settlements. Short-term projects would also include preparatory works for medium and long-term programmes and projects, such as assessment, restoration and strengthening of institutional capacity, assessment of rehabilitation of damaged projects, water source protection, revitalization of the WASH coordination committees, such as the District Water Supply, Sanitation and Hygiene Coordination Committee (DWASHCC) and Village Water Supply, Sanitation and Hygiene Coordination Committee (VWASHCC) for coordinated programming and preparedness for future disasters. The sector will coordinate with other sector line agencies. For example, with the shelter sector, to ensure that sanitation is an integral component of household reconstruction; with the education sector for school WASH; and with the health sector to ensure the provision of WASH facilities in public health institutions. Furthermore, to ensure that water supply is

continuously assured and sustained, the WASH sector will work with other sectors such as forestry, soil conservation and irrigation to address source protection and watershed management.

Medium-term recovery activities (by July 2019) will be implemented until the fiscal year 2018/19, with a particular focus on pipeline programmes and building back better, with priority given to: continuation of rehabilitation and construction of new rural and urban water systems; resumption at-scale of the Social Movement for Total Sanitation; exploration and promotion of alternative mechanisms and technologies, as part of resilience-building for water supply at community and district levels; urban WASH-focused integrated programming; Improvement of service levels from basic to medium; building community and institutional capacities in disaster risk management; strengthening governance, especially among service providers; mainstreaming with Sector Development Plans (SDP), initiation of the strengthening sector monitoring mechanisms, incorporating equity and cross-cutting issues.

Long-term recovery activities (by July 2021 and beyond) will be implemented through fiscal year 2020/21 and beyond, with a focus on completion of major rehabilitation projects, institutional strengthening of the new federal structures, as well as the establishment of robust monitoring and information management mechanisms.

6. IMPLEMENTATION STRATEGY AND RISK ANALYSIS

Anticipated implementation strategy and coordination arrangements

The Ministry of the Water Supply and Sanitation (MOWSS) will be the lead ministry to plan, coordinate and monitor the WASH recovery programme in the country, in close coordination with the National Reconstruction Authority (NRA), the Ministry of Federal Affairs and Local Development (MOFALD), WASH Development Partners and other WASH stakeholders. The ministry will plan and coordinate through the National Sanitation and Hygiene Steering Committee and Coordination Committee at the national level.

The ministry will also ensure that recovery programmes are prioritised and executed in an efficient and coordinated way with the local bodies, line agencies, development partners and other WASH stakeholders at the district, VDC and municipal levels, through the respective DWASHCCs, VWASHCCs and Municipal Water Supply, Sanitation and Hygiene Coordination Committees (MWASHCCs) and also with the district WASH clusters.

A WASH recovery task force will be set up at the national level, by incorporating various relevant sections of the DWSS, MOWSS and MOFALD for better coordination. The task force will report periodically to the Ministry of Water Supply and Sanitation through a Project Implementation Unit (PIU) which is to replace later the existing Project Management Unit (PMU) established at DWSS. Regular reports will likewise be provided to the NRA.

To ensure the transparency, accountability and reliability of development partners' and funding partners' works, the MOWSS will continue to collaborate with such partners, to develop Memoranda of Understanding (MOUs), through DWSS, for the recovery programme. MOUs will also be disseminated to the respective DWASHCCs to facilitate optimal district level planning and

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coordination. The agencies working in the districts will periodically report their works in the DWASHCCs, VWASHCC and MWASHCCs. The 4 W (who, what, where, when) reporting for recovery and reconstruction will continue at both district and national levels, based on the cluster transition plan defined in 2015.

Once the federal structure is set up in the provinces, the respective WASH Coordination Committees will also be re-formed and their capacity strengthened, for them to be able to effectively carry out their roles for both the recovery and regular WASH programmes.

Various stakeholders might have differing implementation modalities, especially for reconstruction of water supply and sanitation facilities. The government faces the challenge of streamlining the relevant support modalities. The government will dialogue with the development partners, so as to agree on uniform support modalities. The sector will closely coordinate with the shelter sector to ensure that the provision of sanitation facilities is an integral part of housing reconstruction works and that support is provided on the basis of Output Based Aid (OBA). The sector will prioritise communities that are deprived of drinking water due to depletion and shifting of water sources, or in need of minor repairs.

Implementation strategies will be based on the principle of building back better (BBB), to ensure 'better and safer' construction also to ensure the adoption of environmentally-responsible practices for disaster risk reduction and resilient development.

The MOWSS will continue to collaborate and seek support from other potential projects and agencies to mainstream their projects in the recovery programme.

Outlined below are key roles and responsibilities as defined within the coordination mechanisms of the government and for WASH stakeholders.

Agency	Recovery roles and responsibilities
MoWSS	Overall coordination with NRA, National Planning Commission, other relevant ministries and development partners for planning, budgeting and monitoring Ensuring that DRR and recovery aspects of the WASH Sectoral Development Plan (SDP) are also mainstreamed in the recovery programme.

DWSS	<p>Coordination with the WASH development partners and other supporting agencies for implementation at the national level</p> <p>Compliance monitoring of MOU with the partners for the recovery programme by ensuring periodic reporting on the expected output and outcomes</p> <p>Implementation of the recovery programme</p> <p>Capacity and institution-building</p> <p>Compilation of progress from districts, using the 4W reporting system made for recovery and reconstruction</p>
WSSDO	<p>Coordination with all the agencies working on reconstruction, updating 4W reports to DWSS; providing guidance and monitoring all agencies to maintain quality of reconstruction; lead as secretariat of DWASHCC and lead for the DRR task force under DWASHCC</p>
NWASHHCC	<p>Sharing plans and progress of the recovery programme with 4W reporting system. The Transition Working Group will provide technical assistance to districts on WASH reconstruction work</p>
DWASHHCC	<p>Coordination with various agencies to plan and monitor reconstruction implementation at the district level; DRR task force under DWASHCC to provide technical assistance and close monitoring of reconstruction work</p> <p>Assessment and validation of information on damaged WASH facilities</p>
VWASHHCC	<p>Coordination with various agencies to plan and monitor implementation at the VDC level</p> <p>Assessment and validation of information on damaged WASH facilities at the VDC level, together with DWASHCC/WSSDO</p>
MoFALD	<p>Coordination with the local bodies for planning, coordination and monitoring of the recovery programme</p>

The sanitation project component needs to be integrated with the housing component of the NRA. While the sanitation and hygiene master plan envisages execution of the ODF campaign through a behaviour change campaign, there has been significant physical damage to domestic toilets, which directly and adversely impacts the ODF status of numerous VDCs, municipalities and districts. This again underscores the importance of the ministry working closely with the NRA to integrate sanitation into housing programmes.

As of now it seems that funding is available for 14 districts, but fewer funds have been committed for the remaining 17 less-affected districts. The ministry will continue to advocate to the NRA and DPs for the allocation of resources for the moderately-affected districts also.

Cross cutting issues

DRR, with 1% of the total recovery investment required for WASH, has been added as a component, to ensure preparedness of the districts for future disasters. The DRR element also includes, amongst other components, early warning systems and buffer stocks of WASH emergency relief materials.

The unit rate for the rehabilitation and reconstruction of the water supply systems includes costs for BBB of the systems. The revival of the ODF status is part of BBB for the sanitation component. Also, incremental improvement to service levels for water supply systems has been introduced in the budget as part of the BBB. Reconstruction will also take into account environmental considerations while water and sanitation planning and design, construction, operation and maintenance is undertaken. Reconstruction of WASH facilities in schools and health service facilities will be coordinated with the respective line agencies. Water source assessment, watershed management, source protection and promotion of resilient sanitation technologies are considered as key activities in the reconstruction work that will ensure environmental concerns are taken into account.

Reconstruction and rehabilitation works aim to create large-scale employment opportunities at village level. In particular, poor people and women are expected to benefit from reconstruction and rehabilitation works.

DWASHCC and VWASHCC/MWASHCC will make periodic monitoring visits and receive progress updates from the implementing agencies, to ensure effective governance, transparency and accountability.

Key risks to implementation and potential mitigation measures:

While priority is being given to people who have lost their houses and livelihoods due to the earthquakes, for building their houses and resuming their livelihoods, they themselves may not give priority to, or have sufficient resources for, rehabilitation and reconstruction of damaged water and sanitation facilities. Therefore the recovery programme needs to offer affected households employment opportunities, rather than seeking voluntary labour, cash and in-kind contributions. Looking at the sustainability of WASH services, development of local technical human resources from various WASH projects, linkages with academic institutions/training centres and on-the-job-training can ensure the sustainability and functionality of WASH services, while also empowering the local population.

In addition, the prioritisation of shelter and restoration of livelihoods should not come at the cost of insufficient attention to, or prioritisation of, the implementation of the WASH reconstruction plan. To ensure practical, integrated planning, the agencies involved in implementation will need to consult with the beneficiary population and local authorities and make localised, participatory plans which incorporate WASH into shelter plans.

As there is already a funding gap of about 75% as regards total recovery needs, it may be challenging to implement all the planned projects. In particular, the BBB components –incremental water supply service level improvements, behaviour change projects for ODF revival, capacity building, and institutional strengthening components, might not be sufficiently prioritised. Thus the ministry will continuously attempt to seek funding and innovative approaches for the BBB components, to ensure the disaster resilience capacity of WASH systems and the institutions.

Current estimates of requirements for reconstruction are likely to vary in earthquake-affected areas, from district to district. As physical verification and service level assessments are still being conducted by the districts, together with central government support, actual requirements may have to be adjusted after the completion of the assessments.

Some donors may not be in a position to indicate their possible future commitments now. The core group and NRA needs to periodically review and update funding commitments and compare priorities among sectors.

7. FINANCIAL REQUIREMENTS AND PLANNING

Revised programme and resource requirements

While setting the vision and revising the objectives of the PDRF, the WASH sector has four key programmes. The Building Back Better (BBB) components, which were separate in the PDNA programme, have been inbuilt in the entire programme. Increased WASH service levels for urban areas and municipalities, as budgeted in the PDNA, have been built into the water and sanitation programme. In the PDRF, two programmes have been added: reconstruction support for institutional WASH facilities and capacity-building. Additionally, provisions for operational and disaster preparedness costs have been made in the revised PDRF financial estimates below:

Activity	Recovery needs (millions)	
	Total, NPR	Total US\$
Water supply	16,995.00	161.9
Sanitation and hygiene	1,442.00	13.4
WASH facilities in institutions	420.00	4.00
Capacity building inclusive of institutional supports	1,217.00	11.60
Total	20,044.00	190.90
Operational cost 5% (2.5 for HR & 2.5 for logistics)	1,002.20	9.5
Disaster preparedness activities (1% of the total)	200.40	1.9
Grand Total	21,247.60	202.3

Financial Requirements for Priority Recovery Programmes

The programme identified during the PDNA was reviewed by the PDRF team, which has slightly revised the programme. The total programme falls in four categories. For each category, project implementation is calculated year to year. The team has utilised the resourcing assumptions made in the PDNA. The total programme cost has been estimated at NPR 21,247 million for the total recovery of the damaged water supply and sanitation systems and facilities, including capacity building and institutional strengthening.

As existing human resources available within government institutions are insufficient to implement all foreseen the recovery works, approximately 2.5% of the required investment is estimated for outsourcing human resources and technical expertise. An additional 2.5% investment is also estimated for meeting logistics requirements for accelerating the recovery works. Approximately 1% of the investment is set aside for carrying out disaster preparedness works in the overall WASH recovery programme.

While reviewing the budget committed by the government, UN agencies, bilateral agencies and others, a total of NPR 5,661.3 million are available, primarily for recovery projects for the initial two years. The available budget represents only about 25% of the total recovery investment required. This shows that an additional NPR 15,246 million is required to meet the recovery needs for a period of five years in the WASH sector. The matrix showing the required investment and the available budget for the initial years 1 and 2 also shows that about 65% of the total investment is required in the initial two years, but the available budget is only about 40% of the total requirement. There is an urgent need to fill this gap for these initial years, to meet the urgent needs of the people for resumption of water supply and sanitation systems and also to revive the Open Defecation Free (ODF) status of the ODF-declared VDCs, municipalities and districts.

SN	Program	Investment requirements in Million NPR							
		FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	Total Program Cost for five years	Budgeted/Committed	Financing gap
A	Water supply	5,384	5,824	2,485	2,485	818	16,995	4,379	12,616
B	Sanitation and Hygiene	502	753	63	62	32	1,412	769	643
C	WASH in Institutions and Public Places	126	294				420	248	172
D	Capacity building, including institutional support	76	285	380	380	96	1,217	265	952
	Total	6087	7155	2928	2927	946	20044	5661.3	14,383
	Operational costs: 5% of total (2.5% for HR and 2.5% for logistics)	304	358	146	146	47	1,002	283	719
	Disaster preparedness activities: 1% of total	61	72	29	29	9	200	57	144
	Grand Total	6,453	7,585	3,104	3,103	1,003	21,247	6001	15,246
	Investment requirements by year	30%	36%	15%	15%	5%	100%		

WASH

TABLE: FINANCIAL REQUIREMENTS FOR PRIORITY RECOVERY PROGRAMME

	Year	2016	2017	2018	2019	2020	Total
	Budget in Million NPR	6,452.8	7,584.8	3,103.7	3,102.6	1,002.8	21,246.6
Program							
Water Supply							
Provision of Basic Water supply through minor repair and basic rehabilitation of water supply schemes and alternate water sources with inclusion of resilience and software components (rural and urban)		1,249.5	535.5				1,785.0
Provision of Basic Water supply in the newly/ to be resettled area		300.0	700.0				1,000.0
Continued water supply in temporary settlements/camps		750.0					750.0
Major redesign and rehabilitation of water supply scheme		3,000.0	3,120.0				6,120.0
Water supply source assessment, protection and watershed management		42.0	84.0	105.0	105.0	84.0	420.0
Promotion of alternative mechanisms and technologies as part of resilience building on water supply at community and district level		42.0	84.0	105.0	105.0	84.0	420.0
Urban Resilience WASH focused integrated program (including wastewater, Fecal sludge management, rainwater harvesting etc and other innovative technologies)			280.0	490.0	490.0	140.0	1,400.0
Improvement of service level from basic to medium (water quality, quantity, accessibility and duration)			1,020.0	1,785.0	1,785.0	510.0	5,100.0
Sub-total A		5,383.5	5,823.5	2,485.0	2,485.0	818.0	16,995.0
Sanitation and Hygiene							
Support for revival of Open Defecation Free (ODF)status of VDCs and Districts		480.0	720.0				1,200.0
Promotion of resilient sanitation technologies		10.0	10.0	10.0	10.0	10.0	50.0
Promotion of improved and safely management sanitation services (decentralized fecal sludge and wastewater management, biogas etc.)			10.0	40.0	40.0	10.0	100.0
Promotion of basic hygiene behaviors such as hand washing, menstrual hygiene management and environmental sanitation		12.0	13.0	13.0	12.0	12.0	62.0

Sub-total B	502.0	753.0	63.0	62.0	32.0	1,412.0
WASH in Institutions and Public Places						0.0
Ensure WASH facilities in institutions such schools and health facilities in coordination with education and health sector	105.0	245.0				350.0
Ensure WASH facilities in public places in coordination with local authorities(Municipalities, urban centers)	21.0	49.0				70.0
Sub-total C	126.0	294.0				420.0
Capacity building						
Assessment of capacities of all WASH institutions on resilient WASH services	31.0					31.0
Assessment of Federal/provincial capacities on WASH service delivery		10.0				10.0
Capacity development on WASH Disaster Risk Management of all stakeholder at national, regional, districts and village level(Urban and rural)	10.0	50.0	50.0	50.0	40.0	200.0
Capacity development on information management, assessment, monitoring and evaluation	5.0	10.0	15.0	15.0	5.0	50.0
Institutional strengthening on improved WASH service delivery including preparedness activities and infrastructure development(Reconstruction of office buildings, Lab support, Development of Standard operating procedures/simulations for service provider)		200.0	300.0	300.0	36.0	836.0
Support on development of integrated WASH strategy (resilient WASH services and preparedness)of Districts and Municipalities and yearly review	20.0	5.0	5.0	5.0	5.0	40.0
Explore and promote innovative and resilient WASH through partnerships (national advocacy with pilot program in selected districts)	10.0	10.0	10.0	10.0	10.0	50.0
Sub-total D	76.0	285.0	380.0	380.0	96.0	1,217.0
Total	6,087.5	7,155.5	2,928.0	2,927.0	946.0	20,044.0
Operational Cost 5% (2.5% for HR and 2.5% for logistics) of total	304.4	357.8	146.4	146.4	47.3	1,002.2
Disaster preparedness activities (1% of total) of total	60.9	71.6	29.3	29.3	9.5	200.4



CROSS-CUTTING ISSUES

Disaster Risk Reduction

Employment & Livelihoods

Environment & Forestry

Gender & Social Inclusion

Governance

Social Protection



Sector Action Plan (SAP)

DISASTER RISK MANAGEMENT

Post-Disaster Recovery Framework, 2073



May 2016

DISASTER RISK MANAGEMENT

1. Situation Analysis

Disaster Risk Management (DRM) assets were limited prior to the earthquake, but nevertheless, the available assets were impacted by the earthquakes of 2015, including Search and Rescue capacity, seismological observation networks and Emergency Operations Centres at district and national levels. Most damage was reported to Search and Rescue-related assets. The recovery strategy focuses on both the rehabilitation of those limited DRM assets that existed at the time of the earthquakes and on reinforcement of the DRM network, to ensure improved preparedness and response capacity for future disaster risks.

2. Strategic recovery vision of Disaster Risk Management

Nepal is a country with a high level of exposure to multiple natural hazards. Over the past years the Government has made significant strides to manage disaster risks by formulating the National Strategy for Disaster Risk Management (NSDRM) and creating a high-level multi-stakeholder mechanism, the Nepal Risk Reduction Consortium (NRRC) in 2009, to pursue disaster risk reduction (DRR) and implement priority risk reduction actions. The 2015 Post-Disaster Needs Assessment (PDNA) notes that while damage to DRR assets has not been substantial, systematic investments in DRR prior to the earthquake were generally low. Much has to be done to reduce the vulnerabilities of people and systems and to minimise the negative impact on lives, livelihoods, assets and the economy, as can be learned from the 2015 earthquake in Nepal.

The DRM recovery framework notes that while the earthquakes of April and May 2015 have again underscored the increasing risk that the population in Nepal have to face, it also recognises that the needed systemic improvements will have to be implemented in a phased manner over a period of time. The Government of Nepal led by the Ministry of Home Affairs (MoHA), the responsible agency for DRM in Nepal, has been engaged in efforts to strengthen necessary legal and institutional arrangements for disaster risk governance, including drafting a disaster management bill. The Ministry of Federal Affairs and Local Development (MoFALD) has been working to build the capacity of district, municipal and village development councils to assess their risks and develop disaster risk management plans. The National Planning Commission (NPC) has been leading the effort to mainstream DRR into routine planning processes whereby sectoral ministries, such as Health and Education have been leading the work to make schools and health services safer and more resilient. Yet, the budget for DRM in government programmes and plans remains uncertain and limited. Therefore, continued funding from development partners is required for DRR initiatives to be sustained. However, strong government leadership and coordination across partners

and sectors for DRR remains key in ensuring that collective efforts are prioritised, strategic and coherent.

The recovery vision of DRM is to create a safer and more resilient Nepal by strengthening the efficiency and effectiveness of disaster risk governance mechanisms to manage and reduce risks, through creating institutional and local recovery and adaptive capacities to sustain them. It will be important also to ensure that gender equality and social inclusion is considered at all stages of DRM - in risk assessment, early warning, preparedness, response and risk reduction.

More importantly, DRM is a cross-cutting issue that underpins the principle of building back better and safer in the context of Nepal's recovery vision in the earthquake-affected areas. While incorporation of DRM into the recovery programming is a priority for the earthquake recovery plan, learning can be applied to other parts of the country that face high risk of earthquakes and other natural hazards such as floods, landslides, droughts and fires. Improvement of systems, through policy engagement and strengthening of institutional mechanisms and capacities, will have benefits beyond the earthquake-affected areas. Conversely, there is an opportunity for work that was led by the DRR community before the earthquake, to really be embedded in and support the current reconstruction effort. For example, previous work on safer construction (i.e., the National Plan of Action for Safer Construction and mason training) is highly relevant and will help accelerate reconstruction.

With assets classified as DRM assets being very scarce prior to the earthquake, the damages recorded by the PDNA too were not substantial. However, the recovery strategy should not only be limited to rehabilitation of these few assets, but should also advocate for assets building in order to ensure better performance in case of any other mega disaster in the country.

3.3. Current status of ongoing recovery

The analysis of the ongoing recovery effort was conducted based on information provided by government and non-government partners during the consultations. Non-government partners include donors, development partners, financial institutions, international and national non-government organisations (I/NGOs). The analysis was undertaken according to the key programme areas identified for DRM in the PDNA.

3.1 Enhancing multi-hazard risk monitoring, vulnerability assessment, risk information dissemination and awareness: Approximately NPR 958 million has been committed in monitoring and mitigation of glacial lake outburst floods (GLOF), seismic and landslide monitoring, updating of the Kathmandu Valley earthquake risk assessment and community risk and vulnerability assessments. Identification of post-disaster/monsoon landslides has been undertaken with the help of satellite image analysis to identify areas at higher risk of landslides due to seismic activities. Out of 99 earthquake-affected settlements surveyed by the Department of Mines and Geology (DMG), 43 were identified as unsafe for in-situ reconstruction. Thorough surveys and continuous monitoring of landslides is essential for reconstruction. GLOF monitoring and early warning currently focuses on Tsho Rolpa and Imja, two of the lakes at high risk.

3.2 Improving legal and institutional arrangements: The 2015 earthquake in Nepal is the first large-scale disaster to occur after the adoption of the Sendai Framework for DRR 2015–2030 in March 2015. Nepal's post-disaster context provides ample opportunities for advancing legal and institutional arrangements with renewed long-term vision and strategy for disaster and climate risk

management. Initial actions have been taken by the Ministry of Home Affairs to document lessons learned from the earthquake, this has also been done by other national institutions such as the Nepal Army. However, there has been slower progress toward enhancement of risk governance mechanisms to address long-term DRM. Some degree of local level DRM planning has taken place with the support of non-government partners. To make DRM planning support systematic, about NPR 92 million is reported to be available for the revision of district disaster preparedness plans, district disaster management plans and local disaster risk management planning process in several earthquake-affected districts. MoFALD is leading the formulation of an urban DRR strategy which holds great relevance for the entire country, particularly so for the earthquake-affected urban areas.

3.3 Improving preparedness, evidence-based response relief and logistics system, and public education: NPR 360 million have been committed for capacity enhancement of Emergency Operation Centres, search and rescue (SAR), and emergency health facilities for mass casualty management. These resources were committed prior to the disaster and are continuing during the recovery and reconstruction phase. The Ministry of Home Affairs has initiated a review of the in-house SAR capacity, based on the experience of the 2015 earthquake. This exercise will facilitate the process of re-prioritisation of SAR capacity along with the existing 2014 SAR Plan of Action. MoHA is also in the process of reviewing the National Disaster Response Framework (NDRF) and logistics capacity based on learning from the 2015 earthquake.

3.4 Strengthening information and communication capacities for relief, response and recovery: Although no concrete action has been taken so far in this area since the earthquake, approximately NPR 28 million has been committed to support improving the community-based information and communication capacity, linking it to district Emergency Operation Centres in the affected districts.

3.5 Improving integration of climate change adaptation and DRR, policy guidelines, institutional development and vi) Mainstreaming DRM into the local development planning process and development sectors, and supporting climate sensitive recovery and reconstruction: The NPC has initiated a three-year periodic planning process, whereby it provides guidance for integration of climate change adaptation (CCA) and DRR into sector planning at central and local levels. The NPC expects further improvement in the guiding policies on CCA/DRR mainstreaming. While mainstreaming DRM for housing is addressed in the Urban and Rural Housing Sector under the PDRF, the DRM sector accounts for NPR 127 million in support to fundamental capacity building of municipalities in the affected districts for building code implementation and risk sensitive planning. At the policy level, although developed before the April earthquake, the Ministry of Urban Development (MoUD) together with MoFALD has finalised the draft National Plan of Action for Safer Building Construction to guide long-term promotion of safe building, beyond the earthquake-affected districts where the risk of earthquake and vulnerability is extremely high. In August 2015, MoUD and MoFALD jointly formulated Guidelines for Settlement Development, Urban Planning and Building Construction for all new construction in the country. The Ministry of Education (MoE), together with MoUD, is identifying and approving technologies (e.g., rammed earth) for resilient school construction, while efforts to retrofit schools by the MoE and key health facilities by the Ministry of Health even prior to the earthquake have gained greater relevance.

Reconstruction: The PDNA identified reconstruction needs totalling NPR 504 million for DRM assets. These assets include 9 District Emergency Operation Centres, 94 stations and installations of hydro-meteorological observation networks, 3 SAR Units of the Nepal Police and Armed Police

Force, 4 fire-fighting units, and a few offices associated with river/flood protection. Commitments towards their reconstruction have not been identified yet.

Out of the NPR 31,700 million total commitment amount reported in the DRM sector, NPR 1,899 million (6 per cent of the total amount reported) is considered directly aligned with the core DRM priorities identified by the PDNA. NPR 28,012 million or 88 per cent of the total amount for the DRM sector could be considered as direct support with DRR elements in other core sectors such as health and nutrition; water, sanitation and hygiene; education; urban and rural housing; and employment and livelihood.

34. Sector results and indicators

4.1 Sector Results

- Reconstruction of highly prioritised DRM assets is completed within time and according to agreed standards.
- A mapping, monitoring and early warning system for identified multiple hazards is in place and risk information is disseminated in a timely manner to vulnerable populations, with particular attention to the most vulnerable and excluded groups
- Increased knowledge, skills and capacities on DRR and climate change among different populations
- Policies, standards and guidelines for earthquake risk management are enhanced and compliance is monitored.
- Inclusive, coordinated and effective preparedness and response systems at national and local levels are in place.
- Enhanced local level and sectoral mainstreaming of DRR/CCA.

4.2 Indicators

- Number of DRM assets reconstructed, rehabilitated and being functional
- Number of hazard monitoring and earthquake warning systems in place, tested and being functional, per cent reached by public education and risk messaging.
- Number of settlements with risk-informed development and functional code- compliant building permit systems
- Number of districts in the earthquake-affected areas with functional preparedness, response and risk reduction plans and mechanisms that ensure gender equality and social inclusion
- Per cent of local governments with dedicated programmes and resources for DRM, climate change and ‘build back better’ initiatives in the earthquake-affected areas.

35. Priority programmes

Strengthening the DRM system for resilient recovery has been identified as a national imperative by the PDNA. Post-earthquake recovery presents an opportunity for planning, coordinating, implementing and sustaining DRM in Nepal, and enhancement of risk governance is identified as a critical prerequisite in the short and long-term that will aid better recovery across sectors. All sectors will also need to incorporate DRR as a cross-cutting concern in their respective interventions to make them resilient.

Guided by these considerations, priorities identified in the PDNA were re-evaluated and sharpened and are grouped under six headings comprising reconstruction and recovery needs in DRM as follows:

- Reconstruction of damaged DRM infrastructure
- Improving preparedness including logistics systems for effective response and relief , particularly for secondary hazards in earthquake-affected areas
- Enhancing early warning systems, dissemination of risk information and multi-hazard monitoring, particularly for secondary hazards in earthquake-affected areas
- Making disaster risk reduction with a focus on earthquake as priority agenda through improvement in safer building construction practices and recovery preparedness
- Strengthening institutional and legal arrangements through uses of experience, learning and best practices in recovery and reconstruction field in earthquake-affected areas
- Improving integration/mainstreaming of CCA and DRR into local level recovery and reconstruction plan and programmes

These programmes have been further categorised under three priorities (first, second and third) based on their importance and urgency, and are listed along with calculated funding requirements in Table XXX.

Overview of Recovery and Reconstruction Needs in DRM (NPR million)

Recovery and Reconstruction Needs	First Priority	Second Priority	Third Priority	Total	PDRF Budget (1 st & 2 nd priorities)
Reconstruction of damaged DRM infrastructure	431	111	0	542	542
Improving preparedness for effective response, relief and logistics systems	1,530	222	1,290	3,043	1,753
Enhancing multi-hazard monitoring and early warning systems	750	20	330	1,100	770
Earthquake risk reduction, safer building construction practices and build back better	710	130	10	850	840
Strengthening legal and institutional arrangements	60	175	45	280	235

Improving integration of CCA and DRR in recovery and reconstruction	108	0	200	308	108
Total	3,589	658	1,875	6,123	4,248

The implementation of first and second priority recovery programmes only, amounting to NPR 4,248 million, is proposed through the PDRF noting the current absorption capacities and limited availability of funds across sectors, but the entire reconstruction needs are programmed for support under the PDRF.

5.1 Reconstruction of damaged DRM infrastructure

Emergency Operation Centres (EOCs), hydro-meteorological observation networks, search and rescue, fire-fighting facilities and facilities for flood protection comprise the majority of damaged DRM assets identified by the PDNA in affected districts. These assets are essential for managing risks and responding to future disasters and will be rebuilt incorporating the principles of building back better.

Reconstruction of EOCs will be undertaken by MoHA over a period of 27 months at a cost of NPR 45 million. Hydrological and meteorological networks will be rehabilitated by the Department of Hydrology and Meteorology (DHM) at a cost of NPR 343 million, addressing 59 first priority stations in the first two years, 21 second priority stations over a period of 24 months commencing from 2018, and the remaining 19 stations from 2019. Reconstruction of damaged SAR facilities of the Nepal Police and the Armed Police Force will be undertaken by MoHA over a period of 27 months at a cost of NPR 124 million. Fire-fighting facilities will be reconstructed through MoFALD in affected districts at a cost of NPR 16 million.

5.2 Improving preparedness for response, relief and logistics systems, particularly for secondary hazards in the earthquake-affected areas.

Anticipated secondary hazards (such as landslides and avalanches) in the earthquake-affected areas and their potential impact in addition to monsoon flooding are key priorities. Enhancement of infrastructure and systems for professional SAR capacities of the Nepal Police, Armed Police Force and Army as per the National Strategy for SAR, along with mechanisms for monsoon (and seasonal) disaster preparedness and information coordination at local levels are accorded highest priority. These will be implemented over a period of five years at a cost of NPR 1,333 million by MoHA. With a focus on strengthening existing systems at the national and district levels for coordinated relief and response, the programme implemented by MoHA will also support consolidation and expansion of EOCs in 22 additional districts, improvement in communication and DRR information management portal and system at the national and district EOCs. Strengthening of logistics hubs for better response, though necessary, have not been included under the PDRF and would need to be supported through the regular development budget or by development partners.

5.3 Enhancing multi-hazard monitoring, early warning capacities and dissemination of risk information, particularly for secondary hazards in the earthquake-affected areas

Early warning capacities will be strengthened through improved hazard monitoring for the anticipated increase in the occurrence of landslides and other secondary hazards, frequent and damaging floods, droughts and fires as well as earthquakes. This will be undertaken through the prioritised programme implemented by the DHM, the DMG, the Department of Water Induced Disaster Prevention, the Department of Soil Conservation and Watershed Management and the National Seismology Centre over a period of three years at a cost of NPR 520 million. Risk information dissemination, public education and awareness to populations at risk have also been accorded highest priority to be implemented by MoHA and MoFALD in collaboration with all relevant departments over the next five years, requiring NPR 280 million.

Additionally, monitoring of other significant hazards such as glacial lake outburst floods and DRM capacity enhancement through academic institutions, though important, have not been costed in the PDRF.

5.4 Disaster Risk Reduction with a focus on earthquake, safer building construction practices and recovery preparedness

With a focus on earthquake risk reduction, the development and implementation of building by-laws based on risk-informed land use planning, enforcement of building codes through municipalities by MoFALD and MoUD (5 years) and systematisation of artisans' training for safer building construction respectively by MoUD (3 years) are accorded the highest priority requiring NPR 360 million.

The owner-driven reconstruction approach adopted for housing necessitates the continuation, expansion and customisation of capacity building and awareness initiatives undertaken by DRM actors on safer construction that were primarily focused on urban areas and technologies prior to the earthquake. A menu of locally relevant, cost-effective appropriate construction technologies needs to be developed and promoted particularly for rural areas, and capacities created to implement them through trained masons and engineers in coordination with the housing sector, requiring NPR 300 million. Though focused on the affected districts, this would also be relevant for all districts in Nepal vulnerable to damaging earthquakes.

Strengthening seismic codes, establishing municipal systems for risk management and engagement of engineering, land use and environment management professionals in DRM is also a priority, estimated at NPR 130 million. Noting the frequent and damaging impacts of disasters, recovery preparedness through capacity enhancement for assessments, planning and implementation of recovery is identified as a high priority requiring an investment of NPR 50 million over 4 years. Private sector engagement will need to be pursued through dialogues for investments based on the PDRF and application of innovative systems and technologies for earthquakes and other hazards.

5.5 Improving institutional and legal arrangements through learning and best practice in recovery and reconstruction in the earthquake-affected areas

A key priority is strengthening risk governance through formulation and enforcement of institutional and legislative systems for DRM, incorporating the Sendai Framework for DRR (SFDRR) principles that would help clarify and strengthen legal and institutional arrangements while learning from the ongoing recovery and reconstruction. The reconstruction policy makes provision for integration of the recovery and reconstruction capacities and systems of the National Reconstruction Authority (NRA) into a future disaster management (DM) institution at the conclusion of the reconstruction after five years.

While creation of institutions under the federal structure following the new Constitution is still in a state of transition, appropriate institutional provisions for incorporation of DRR into recovery and reconstruction programmes is a priority that needs to be developed in consultation with the NRA and key ministries. At the same time, development and implementation of a post-2015 framework for DRM incorporating the SFDRR and the Sustainable Development Goals (SDGs) while supporting the development of a legal framework for DRM in Nepal needs to be prioritised for implementation over the next two years at a cost of NPR 60 million. Strengthening national and local institutions for DRM and the development of policy to be implemented after formalisation of DRM legislation is estimated at NPR 175 million.

Other programmes requiring an allocation of NPR 45 million, such as frameworks and guidelines formulation, were perceived as needing to be aligned with the DRM institutional and legal systems once formalised, and are not included in the PDRF.

5.6 Improving integration and mainstreaming of CCA and DRR in local development, recovery and reconstruction

Enhancing the linkages between local mechanisms for DRR and CCA through revising district disaster management plans, integration of Local Adaptation Plans for Action (LAPA), engaging the district level sectoral agencies and integration into local development plans has been identified as the highest priority requiring NPR 103 million over the next five years. Noting that mainstreaming DRM is embedded within the respective sectors' recovery and reconstruction programmes, a specific priority has been identified on exploring insurance mechanisms as a means of risk transfer to be implemented by the NPC requiring NPR 5 million over the next three years.

36. Implementation strategy and risk analysis

6.1 Key partners involved in rolling out the implementation

Disaster risk management priorities in the PDRF will be carried out under the direction of the NRA by different ministries and departments, including MoHA, MoUD, MoFALD, DHM, the Department of Water Induced Disaster Prevention (DWIDP), DMG, Department of Soil Conservation and Watershed Management (DSCWM), the National Seismology Centre (NSC) and the NPC.

Technical assistance from development partners could be mobilised to support the implementation as may be required.

For some of the technical aspects of DRM recovery and reconstruction priority actions addressed in this chapter, engagement of and collaboration with academic institutions, professional societies and the private sector should be maximised.

6.2 Framing modality for planning and monitoring

Under the direction of the NRA responsible for all programmes implemented under the PDRF, as the nodal ministry for DRM MoHA will convene a steering committee comprising representatives from the NPC, relevant implementing ministries, departments and key development partners to jointly monitor and guide overall progress of priority DRM initiatives. The steering committee may identify and adopt any other roll-out arrangement agreed among the key stakeholders to ensure priority actions are implemented in an effective and coordinated manner.

DRM priority areas under the PDRF may need to be further detailed into sub-activities by the responsible government agencies in order to ensure smooth resource allocation, implementation and monitoring. Where necessary and appropriate, consultations with other relevant ministries, agencies and non-government partners should be held. The gender responsive budgeting

mechanism of the government should be applied for resource allocation to ensure all DRM interventions will include the most vulnerable and excluded groups, and leave no one behind.

The overall progress reporting mechanism, including the reporting format, will be elaborated under the guidance of the NRA through the Steering Committee, and MoHA will coordinate among all implementing partners for progress reporting to the NRA on programme targets for all resources mobilised for DRM under the PDRF. With a view to overseeing, monitoring and ensuring the mainstreaming of disaster risk reduction measures into other sectors' recovery and reconstruction, if not already provisioned by the NRA, a committee led by the Social Mobilisation and Recovery Division (responsible for DRM) of the NRA will serve as a mechanism for sectors to report on the status of integrating resilience and build back better approaches. Periodic review and consultation meetings/workshops will be organised for all stakeholders to assess the progress and agree on the plans, resource mobilisation and setting of the targets.

At sub-national levels, through the sub-regional NRA offices, District Administration Offices will be responsible for guiding and facilitating the relevant DRM priority activities at sub-national level (District Development Committee (DDC), Municipality and Village Development Committee (VDC)). At the district level, where appropriate, the District Disaster Relief Committee (DDRC), where the Local Development Officer is Member Secretary, will act as the steering committee and coordinate with both national and local levels for resource mobilisation and programme implementation. The DDRC may identify and adopt any other implementation arrangements (sub-committee or task team) comprising DRM sector stakeholders, to ensure that all priority actions are implemented in an effective and coordinated manner. If necessary, to complement the NRA-led recovery coordination mechanism at sub-national levels, the DDRC and the DDC, with support from implementing partners, will collect and compile progress updates from all implementing partners in the district and submit the report to the NRA through MoHA. Periodic review and consultation meetings or workshops will be organised for all stakeholders to assess the progress made, agree on future plans, resource mobilisation and setting of targets.

6.3 Key issues, recommendations and risk analysis

As addressed throughout this chapter, the expectation of the PDRF DRM sector is that learning from the 2015 earthquake will contribute to momentum around promotion of nationwide resilience building through improved disaster and climate risk management. While the PDRF requires specific priorities and actions to be carried out within the period of five years, this is seen as a catalytic process that encourages systemic reforms, multi-stakeholder engagement and dialogue to achieve long-term DRM priorities.

Risk Analysis

Risk	Mitigation
Sudden external shocks such as political instability and recurrent disasters of different scale which could affect the progress	Continued investment in disaster risk management for multi-hazard risks, particularly secondary disasters in and outside earthquake-affected districts Contextual and political analysis to monitor the situation and adapt the programming as necessary. Update risk assessment of Nepal for sudden onset risks and improve the quality of maps and their dissemination
Insufficient coordination among and commitment from line ministries	For resources mobilized through PDRF, NRA to lead regular coordination, monitoring and communication on DRM with involvement of MoHA. Joint work plan on annual basis Joint monitoring and training
Programme and resource duplication of PDRF priorities and investment in DRM outside PDRF	Planning and monitoring of resource allocation and progress to be carried out regularly to avoid duplication
Additional workload to local bodies with limited capacity and resources	Augmenting staff capacity and providing them with technical assistance Support increased need of resources through volunteer specialists to build contextualized capacity; increased engagement of volunteer networks
Lack of political will	Maximize the existing capacity and roles of MoHA and MoFALD to reach national, regional and local levels, to generate political commitment
Low enforcement of regulations and compliance	Joint monitoring Local level monitoring by agencies Community level reporting
Low capacity of implementing agencies and local governments	Training of technical experts and planners

37. Financial requirements and planning

Detailed information on damaged DRM infrastructure and costs for their reconstruction while building back better was received from all relevant government departments during the PDNA. This information served as the basis for estimating reconstruction needs in the PDRF. The departments were encouraged to review and accordingly update the figures, if repairs and reconstruction were already undertaken through any source over the interim 10 months.

The cost for recovery in the five major areas was re-estimated based on the preliminary calculations that formed the basis for the PDNA projections. In May and June 2015, relevant government departments and development partners had calculated costs for each activity under the major priorities. These were reviewed and updated with a view to further improve the estimations based on similar activities that may have been undertaken in the past. This has resulted in the reduced estimate of NPR 4,248 million in the PDRF.

As elaborated in the Table below, the annual disbursement varies between NPR 980 million in the second year and NPR 683 million in the fifth year. The disbursement is planned considering the implementation capacities in place.

Table- Annual disbursement (NPR million)

Recovery and Reconstruction Needs	Y1	Y2	Y3	Y4	Y5	Total
Reconstruction of damaged DRM infrastructure	179	204	82	41	37	542
Improving preparedness for effective response, relief and logistics systems	352	352	352	352	346	1,753
Enhancing multi-hazard monitoring and early warning systems	219	224	204	61	61	770
Earthquake risk reduction, safer building construction practices and recovery preparedness	147	158	185	182	169	840
Improving legal and institutional arrangements	20	20	95	50	50	235
Improving integration of CCA and DRR, recovery and reconstruction	24	22	22	20	20	108
Total	940	980	939	705	683	4,248

As detailed in Worksheets #1, 2 and 3, there is not much on-budget or off-budget funding for the priorities identified under the PDRF. Hence the funding sources are largely unknown.

Disaster Risk Reduction

TABLE: FINANCIAL REQUIREMENTS FOR PRIORITY RECOVERY PROGRAMME

	Year	2016	2017	2018	2019	2020	Total	On-budget sources	Off-budget sources	Unknown
Budget in Million NPR		940.1	980.3	939.5	705.2	682.7	4,247.8	0.0	1,292.6	4,830.2
Program										
Enhancing multi hazard risk monitoring, vulnerability assessment, risk information dissemination and awareness.		219.3	224.3	204.3	61.0	61.0	1,100.0		590.9	509.1
Multi Hazard risk and Vulnerability assessment		60.0	60.0	60.0	60.0	60.0	300.0		525.4	-225.4
Monitoring of multi hazard (it does NOT include any cost of any mitigation measures)							520.0			520.0
Seismic hazard monitoring		20.0	20.0				40.0		42.1	-2.1
Flood monitoring		66.7	66.7	66.7			200.0			200.0
Landslide monitoring (increased risk due to seismicity)		66.7	66.7	66.7			200.0		8.4	191.6
Glacial lakes and GLOF monitoring				10.0	10.0	10.0	30.0		15.0	15.0
Drought monitoring		10.0	10.0	10.0			30.0			30.0
Fire hazard monitoring			5.0	5.0	5.0	5.0	20.0			20.0
Improvement of Geoinformation collection, evaluation and analysis - Continuously Observing Reference Station & Rehabilitation of Geodetic Network		762.0	584.3	492.4	432.3	389.8				0.0
Improvement of Geoinformation collection, evaluation and analysis Production of high resolution Digital Terrain Model (DTM) and Orthophoto Image			1,200.0	1,195.5	45.0					0.0

Sector Plans and Financial Projections- Working Documents

Risk information dissemination, public education and awareness and strengthening capacities of associated institutions	56.0	56.0	56.0	56.0	56.0	280.0		280.0
Improving Legal and Institutional Arrangements	20.0	20.0	95.0	50.0	50.0	280.0	0.0	280.0
Legislation and Institutional Development						210.0		210.0
Development and implementation of Post 2015 Framework, DM Act/Regulations formulation and enforcement	20.0	20.0	20.0			60.0		60.0
Strengthening national institutions for DRM			16.7	16.7	16.7	50.0		50.0
Strengthening local institutions for DRM			33.3	33.3	33.3	100.0		100.0
Development Policy			25.0			25.0		25.0
Guidelines and Frameworks			10.0	20.0	15.0	45.0		45.0
Earthquake Risk Reduction, Safer Building construction Practices and recovery preparedness	146.5	158.0	184.7	181.7	169.2	850.0	127.5	722.5
Building Bye laws based on Risk Sensitive land use Planning; Development and implementation (incl. capacity building) of code complaint Manual and electronic Building Permit System	70.0	70.0	70.0	70.0	70.0	350.0	127.5	222.5
Municipal Information System and Inventory of existing building database and vulnerability assessment			16.7	16.7	16.7	50.0		50.0
Improvement of Seismic codes and retrofitting guidelines;		2.5	2.5	2.5	2.5	10.0		10.0
Certification of Structural Engineers through Nepal Engineering Council		2.5	2.5	2.5	2.5	10.0		10.0
Establishment of Engineering Staff College		10.0	20.0	20.0	20.0	70.0		70.0
Systematization of skilled artisans trained for safer building construction	4.0	3.0	3.0			10.0		10.0
Recovery preparedness capacities and systems enhancement	12.5	12.5	12.5	12.5		50.0		50.0
Appropriate technologies for housing-awareness raising and capacity building	60.0	60.0	60.0	60.0	60.0	300.0		

Operationalization of policy, guidelines and framework (Human Resource management)						0.0		0.0
Improving preparedness, evidence based response, relief and logistics system, public education.	351.7	351.7	351.7	351.7	345.7	3,042.6	570.0	2,472.6
Building and Strengthening the EOCs	44.4	44.4	44.4	44.4	44.4	222.2	4.5	217.7
Monsoon forums for enhanced preparedness and forums	8.5	8.5	8.5	8.5	8.5	42.5		42.5
Search and Rescue Operation (Professional - Army, Nepal Police, Armed Police Force)	248.0	248.0	248.0	248.0	248.0	1,240.0	157.5	1,082.5
Developing logistics hubs for disaster response	252.0	252.0	252.0	252.0	252.0	1,260.0	306.0	954.0
Strengthening preparedness/ response effectiveness and information coordination in districts and communities	10.1	10.1	10.1	10.1	10.1	50.4	102.0	-51.7
Fire Services	30.0	30.0	30.0	30.0	24.0	144.0		144.0
Big data mining for every major events - Capacity building and trainings (Mining the data from social forums to create and validate data points, and effectiveness of various programs)	6.0	6.0	6.0	6.0	6.0	30.0	21.3	8.7
Communication for relief and recovery	10.7	10.7	10.7	10.7	10.7	53.6		53.6
Improving integration of climate change adaptation and DRR, mainstreaming	24.0	22.0	22.0	20.0	20.0	308.0	4.2	303.8
Unified methodology of CCA and DRR (harmonization of guideline) ; CCA : risk, database, modelling in the country, dissemination	150.0					150.0		150.0
Promotion of demonstration projects already funded – best practices – knowledge management (COP = communities of practice)	50.0					50.0		50.0
Mainstreaming of the existing policies at national and district levels (revising the District Disaster Management Plans + District Line Agencies for all sectors)	20.0	20.0	20.0	20.0	20.0	100.0	4.2	95.8

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integration of LDRMP and CDRMP into local development plan	3.0					3.0	87.5	-84.5
Structural - Housing (private & public) and Physical Infrastructure						0.0		0.0
Mainstreaming into Physical infrastructure planning, development and implementation						0.0		0.0
Insurance Mechanisms	1.0	2.0	2.0			5.0		5.0
Sub-Total Recovery Needs	761.6	776.1	857.7	664.4	645.9	5,580.6	1,292.6	4,288.0
Emergency operation centres						45.0		45.0
9 EOCs	22.5	22.5				45.0		45.0
Hydro-meteorological observation networks						343.4		343.4
Hydrological observation networks								
First priority hydrological observation networks	92.9	121.2	9.4			223.5		223.5
Second priority hydrological observation networks		27.7	33.9			61.6		61.6
Meteorological observation networks								0.0
First priority Meteorological observation networks	8.6					8.6		8.6
Second priority Meteorological observation networks		8.0	8.0			16.0		16.0
Additional second priority Meteorological observation networks			5.6	16.1	12.0	33.7		33.7
Search & rescue and fire services						139.8		139.8
Nepal Police SAR	24.8	24.8	24.8	24.8	24.8	124.0		124.0
Fire Services	15.8					15.8		
River/ Flood protection embankments						14.0		14.0
Embankments and offices	14.0					14.2		14.2
Sub-total Reconstruction Needs	178.5	204.3	81.8	40.8	36.8	542.2	0.0	542.2

Sector Action Plan (SAP)

Employment and Livelihood

Post-Disaster Recovery Framework, 2073



May 2016

EMPLOYMENT AND LIVELIHOOD

1. Situation Analysis

The earthquakes of 25 April and 12 May affected the livelihoods of an estimated 2.287 million households. It is estimated 148 million workdays (equivalent to NPR 27.5 billion) were lost in districts affected by the earthquakes. The main labour earnings and workday losses were in agriculture with an estimated labour earnings of NPR 12,609 million and 102 million workdays (PDNA in ICIMOD 2015). This is followed by tourism with NPR 11,163 million in labour earnings, and 35 million workdays, and commerce and industry at NPR 3774 million labour earnings, and 11 million workdays. One year on, workers and households in the worst affected earthquake districts struggle to recover due to additional stress and risks that have affected Nepal, and a slow recovery and reconstruction process.

2. Strategic Recovery Vision for the Sector

Employment and livelihood-related interventions aim to enable households and workers to recover employment opportunities, engage in productive and income-generating activities, and ensure a stable and resilient asset base.

Recovery and Reconstruction Priorities

In the short term, employment and livelihoods highlight opportunities emerging as part of the recovery process - specifically skills development and training in response to labour needs. These labour needs are emerging from the construction process, and the focus will be on assessing and rolling out appropriate skills training and development.

In addition to employment opportunities in the short term, there is a need for support for recovery of existing livelihoods strategies. These are targeted interventions within the key productive sectors of agriculture and irrigation, tourism, and commerce and industry.

In the medium term, in addition to leveraging opportunities from the recovery and reconstruction process, there is also an emphasis on targeted livelihood support within productive sectors. To ensure a long-term, resilient livelihoods approach, the medium term goal is to also begin identifying potential diversification strategies.

The long term aims to support communities to diversify their livelihoods and employment opportunities, ideally building on prior skills and training. Employment and livelihoods diversification aims to ensure resilience and to ensure that households, workers, and communities have the ability to recover and adapt to future stressors and risks.

3: Current Status of ongoing recovery efforts in the sector

Employment and livelihoods were affected across multiple sectors, including agriculture and irrigation, commerce and industry, tourism and education. The extensive damages are detailed within the PDNA and within respective sector chapters. Moving forward, there is need to recognise that employment and livelihoods is an important cross-cutting sector. There are certain key employment and livelihoods concerns that need to be highlighted.

Following the earthquakes, the lives and livelihoods of households were further impacted with additional stressors and risks. Economic forecasts paint a bleak picture of Nepal's economy with only two percent economic growth for FY 2015-2016 (White Paper, Gov. Nepal, November 2015). This is attributed to a shrinking of economic activities, with obstructions in the supply system triggered by agitations, strikes, and the undeclared blockade. It impacted on-going response and recovery activities (Joint Assessment). It led to stress on households with price of lentils, pulses, and cooking oil increasing 30% since August 2015. Approximately 2,200 industries were shut down with more than 200,000 people unemployed (White Paper Nov 2015). This is an important consideration in recovery and reconstruction, highlighting the need for resilience-building to reduce negative coping strategies.

As of October 2015, 60% of households in the 11 most-affected districts engaged in livelihoods-based coping strategies, including informal and formal money lending, and with low percentages depleting their existing assets, either through consumption or sale (Joint Assessment, January 2016). An estimated 78.9% of households reported holding debt in September 2015, with a quarter accumulated in the six months following the earthquake. The main sectors generating employment and forming the livelihoods base in Nepal are agriculture, tourism, and commerce and industry.

In addition to effects of the earthquake on agriculture, tourism, education, commerce and industry, one key coping strategy is international and internal migration. Migration is an important factor during response, recovery and recovery processes. Predominantly male out-migration for employment has changed the socio-demographic dynamics across communities in hills and mountains of Nepal, with women taking on additional work burden. In earthquake-affected districts, 12% to 32% of households reported having at least one member working as migrant labour (CBS 2010 in ICIMOD 2015). The remittances did play an important role in post earthquake recovery, with an increase in remittances in the period following the earthquake compared to earlier years (ILO). In addition to migration as an existing livelihoods strategy, it also is an important option for households looking to diversify their employment and livelihoods strategies to support their earthquake recovery process. However, this also connects them to a global employment market - both opportunities and risks. For example, Malaysia, a major destination country for Nepali migrant workers, has agreed to recruit 500,000 workers from Bangladesh, and levy a new policy. With the policy in effect, an estimated 200,000 Nepali workers are likely to return, requiring employment and effective utilisation of their skills and knowledge. The recovery and reconstruction needs to recognise and negotiate migration as an important livelihoods strategy - both the opportunities it presents, and the risks.

The on-going recovery and reconstruction is essential in supporting employment and livelihoods across earthquake-affected districts. Emergency and recovery aid has played an important role in enabling people to rebuild their livelihoods, as a number of households reported an increased

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contribution of cash and food grants to help them meet their basic needs (Joint Assessment Jan 2016). Unconditional and conditional cash and food grants play an important role in ensuring that vulnerable households have a social safety net. In the upcoming recovery and reconstruction phases, conditional support will help vulnerable households and communities cope with additional stressors and risks.

Recovery and reconstruction also provide important opportunities for employment and livelihoods that are already being leveraged. There has been a sharp increase in labour demand for reconstruction works. It is estimated that housing reconstruction work alone may generate 352 million workdays over the next five years (ICIMOD 2015). However the main challenge is to ensure skilled labour. To ensure a positive and informed employment market, there is a need to develop functional employment service centres, to assist job seekers to access skills and training opportunities and job-related information. Targeted skills trainings and development and complementary livelihood support systems are key aspect of reconstruction and recovery.

Following the earthquake, the government, together with development partners, has supported recovery and reconstruction efforts in sectors key to employment and livelihoods, including agriculture, tourism, commerce and industry and education. While these projects are reported under the respective sectors, they play an important role in sustaining employment and livelihoods.

The employment and livelihoods priorities respond to the need for increased employment opportunities, support for existing strategies specifically in agriculture, tourism, and commerce and industry, diversified income-generating activities and sources, and resilience-building for sustainable livelihoods.

4. Expected sector results and indicators

The indicators are related to the main objectives identified for implementation:

1. Create employment opportunities through labour-intensive infrastructure and rehabilitation activities in disaster-affected areas.

- i. Labour intensive reconstruction strategy in place to coordinate labour market response.
- ii. Child labour and occupation safety standards and non-discriminatory practices trainings for stakeholders.

2. Expanding job information services

- i. Establishment of employment service centres in earthquake-affected districts
- ii. Train service providers to match jobs and skills.

3. Skills Development for Employment and Economic Recovery

- i. Needs assessment to identify demand and establish a strategy for supply of skilled labour
- ii. On the job skills training of trainers.

5. Priority Recovery Programmes

While recognising the cross-cutting importance of employment and livelihoods, there is also a need for targeted programmes that support the recovery and reconstruction efforts.

Short to medium term priorities

The short-term priorities reflect continued response and recovery activities initiated during the emergency period. They aim to leverage and manage employment and livelihoods opportunities emerging from the recovery phase:

- Create emergency employment opportunities through labour-intensive infrastructure and rehabilitation activities. Ensure participation of vulnerable households, and groups including women and disadvantaged communities.
- Coordinate extensive awareness-building exercises for contractors and implementers to ensure worker safety, and awareness about occupational safety practices. Prevent child labour and enforce related policy as a key safeguard.
- Conduct needs assessments to identify relevant skills development and training programmes needed. Build capacity to deliver trainings with a focus on training of trainers and on the job trainings.
- Establishment of employment service centres in earthquake affected areas with high labour demands to support workers in accessing timely and informed employment opportunities.
- Rapid skills and vocation training to support rehabilitation and reconstruction of housing, settlements, and community infrastructure. Ensure coordination mechanisms among partners to facilitate labour provision and distribution.
- Extend vocational training centres' functions so that they become hubs for delivery of services in local economic development. These services could include agricultural extension, business advisory services, and space for start. Introduce on the job training.
- Support the recovery of micro and small enterprises through training and the affected areas with special attention to informal entrepreneurs to graduate to formal economy
- Identify and document returnee migrants to identify new skills and knowledge. Create work opportunities for returnees within recovery work.
- Targeted interventions to mobilise locally-available youth labour force as well as returnee migrant workers in the agriculture sector by providing job opportunities, in order to reduce their vulnerabilities
- Skills and awareness-raising for potential migrant workers and expand migration resource centres.

Long-term Priorities

- Establish a sustainable labour market information system and strengthen employment service centres.
- Provide skills development for under-skilled and vulnerable workers.

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- Expand migrant resource centres and skills for migrant workers
- Strengthen the systems established in the early recovery phase, to sustain people's employment and livelihoods and build resilience.

Programme design considerations

- Ensure inclusion of vulnerable groups and communities including women, disadvantaged communities (Dalits, and targeting hill/ mountain ethnic groups), working age youth.
- Integrate and use effective assessment and analysis systems to inform beneficiary identification, with follow-up monitoring and evaluation.
- Prioritise and integrate community based planning to ensure participation and ownership.
- Cash/Food for Work programmes need to take special consideration and create non-physical labour-intensive opportunities for targeted groups.
- Undertake required environmental assessments and integrate disaster risk management measures when viable.
- Integrate phase-out period for aid systems.
- Procure goods and services locally, whenever possible during relief and reconstruction process to support local markets and economy

6. Implementation strategy and risk analysis

As a cross-cutting sector, key livelihoods and employment programmes will be implemented under other sectors. In terms of skills development and trainings, the Ministry of Labour and Employment (MOLE) will be the lead. MOLE will work with continue to work with key partners to assess and meet the demand for workers. The main collaborating partners will be ILO and UNDP. To facilitate widespread skills training, there will be district level centres in coordination with the District Development Committee, and at the community level with the VDC. As MOLE is responding to needs emerging from recovery and reconstruction process, it will lead the coordination mechanism among ministries.

The main activity that will define the effective implementation of skills development, training programmes and employment systems is an accurate assessment of the needs emerging from the recovery and reconstruction process. This assessment needs to examine the needs at national, district, and community level. These will inform the development and matching the demands with the existing labour market. Moving further, these systems needs to be considered as long-term integrated systems with potential to strengthen as a key resource in the long term.

There is a high risk for duplication of employment and livelihoods specifically considering programmes on skills development and trainings. There is a need for coordination mechanisms and a cohesive approach with special attention to education, housing, settlements, community infrastructure, agriculture and irrigation, tourism, commerce and industry, and environment and forestry. On the other hand, for cross-cutting livelihoods programmes, there is also a risk of programmes not being adopted or recognised by pertinent sectors and of leaving a crucial

livelihoods support gap, especially in terms of ensuring the asset base and providing key services and a social security and safety net.

Overall, there is a need for extensive capacity-building to support the implementation of large-scale skills development and training with the focal Ministry of Labour and Employment and other related line Ministries.

7. Financial Requirements

Considering that employment and livelihoods is a cross cutting sector, programme and project funding will be both situated with the focal Ministry of Labour and Employment but also with related sectors. These programmes fill in key gaps within other sectors, and financial discussions are still required with respective ministries. These programmes are crucial to a cohesive approach, and to ensure important support systems for employment and livelihoods in earthquake affected districts.

In terms of targeted employment and livelihoods financial requirements: the funding aims to address the high demand for skills development and training required for the recovery and reconstruction process. Additionally, the recovery and reconstruction process will impact the labour and employment market, and systems need to be established to evaluate and match the demand with potential workers. In the long term, employment and information systems established through this process are likely to support a more informed labour market.

Annex 1: Integrating Employment and Livelihoods

The main recovery priorities are cross-cutting across multiple sectors and themes. The main emerging needs for all sectors is that emerging employment opportunities be managed effectively. This included needs assessments, targeted skills and vocational trainings, and complementary resource availability. Additional, integrated employment information systems established are an important resource and asset to managing employment opportunities and the labour market. Here are targeted considerations for different sectors that are based on gaps identified in preliminary reports:

In Housing, Infrastructure Rebuilding and Development

There is expected to be an increased labour demand and a rise in wages in the field of construction. One of the main demand sectors will be housing (in rural and urban areas), settlements and community infrastructure. The main challenge will be to meet the demand for skilled workers in construction, which represents some 40 percent of the needed workforce. It is also estimated that large-scale housing reconstruction may generate up to 352 million workdays over the next five years (PDNA 2015).

To support construction and ensure the safety and health of workers, awareness-building activities for contractors, engineering organizations, and implementers will need to be integrated into early reconstruction phase in collaboration with MOLE. Key awareness practices include occupational safety and health norms to protect workers, decent working conditions, and prevention of child labour.

In addition to awareness building activities, NRA and MOLE needs to coordinate the labour demand by developing a skills training and development strategy. A key aspect of the strategy is temporary employment service centres in earthquake affected areas that will be set up and coordinated by MOLE. These centres will facilitate information for job seekers and employers, assess demands, and match jobs with necessary skilled workers. It will be an important mechanism to facilitate skills trainings and development. The construction industry requires a highly varied skill set starting with unskilled labour to skilled opportunities such as electricians, plumbers, masons, wood workers to highly skilled engineers. It is also estimated housing and settlement reconstruction will require 17,500 masons (ILO 2016).

A number of these skills are also relevant to other related infrastructure sectors including electricity, communications, government office buildings, transport, and water supply systems that will have construction-oriented jobs. Additionally, construction plays a crucial aspect in key productive sectors such as rebuilding agriculture and irrigation systems, rebuilding SMSE under commerce and industry, in terms of trail rehabilitation and supporting tourism infrastructure. In addition to supporting the rehabilitation of main livelihoods streams, it will also play an important role in rebuilding and ensuring the WASH systems, slope management, landslide prevention and community forest land restoration, energy and communication infrastructure. Finally, construction demands will also arise from social sectors with the need to rebuild and strengthen health service centres, schools, and restore cultural heritage sites.

While construction plays an important role in generating employment opportunities, it also supports a key social safety programmes, Cash/ Food for Work. Cash/ Food for Work supports labour intensive projects such as those found in construction industry, and especially for community infrastructure. It provides an essential safety net and social protection programme that addresses concerns of food insecurity, and support vulnerable households.¹⁹ Additionally, it develops key community infrastructure that is part of the asset base for livelihoods. Many community infrastructure projects are also found within other related sectors such as irrigation, WASH, restoring water supply systems, trails and roads building, and market rehabilitation. These programmes also need to negotiate labour demands, targeting vulnerable households and communities, ensure workplace safety, and create alternative employment opportunities for those unable to engage in hard labour. Cash/ Food for work programmes also form an important platform to build skills and engage beneficiaries in vocational. trainings.

Overall, the main employment opportunities, and Cash/Food for Work programming opportunities are within a cross cutting construction industry. The role of employment and livelihoods sector with the PDRF is to assess the labour demands, raise awareness on safety and occupational hazards, ensure oversight to prevent labour abuses. Additionally it needs to ensure targeted skills training and development with coordination mechanisms to support other sectors.

Employment and Livelihoods Support in Productive Sectors

In addition to employment generated from construction in the reconstruction and recovery periods, targeted livelihoods support is essential within key productive sectors of agriculture and irrigation, tourism, and commerce industry, and forestry. These sectors saw extensive damages and losses, and households and communities engaged in livelihoods strategies within these sectors require

¹⁹ ILO, WFP, UNDP, ICRC/IFRC all initiated essential Cash/Food for Work programmes to support communities. Activities included rebuilding access infrastructure, debris clearance, building community-based infrastructure, and working on Disaster Risk Management infrastructure and projects.

support. The majority of the key livelihoods support programmes are within the respective sector documents, however a general overview is provided:

Agriculture and Irrigation

Agriculture and irrigation saw extensive damages to croplands, physical infrastructure including irrigation schemes and water supply systems, livestock shelters and livestock losses, agriculture tools, equipment and machineries, and related support centres. Moving forward, the priority programmes aim to ensure the restoration and functioning of basic operational systems, and structures to restart sectoral growth. In addition to targeted agricultural and irrigation programmes, there linkages to other related sectors that provide potential employment and livelihoods opportunities. These include the following:

- Ensuring that construction of key infrastructure related to agriculture and irrigation is coordinated through the NRA and MOLE to avoid replication or gaps. Leverage the skills training and development schemes to provide workers multiple employment opportunities.
- Working with commerce and industry to support the restoration of supply for agricultural supply chains - both for key agricultural supplies essential to support restarting the sector, and supporting markets for the products. Potential local markets can be identified and coordinated with the Tourism sector.
- Focus on increasing the capacity of women's groups and cooperatives who play an increasingly important role in agriculture due to 'feminisation' as a result of demographic and population changes.
- Application of labour efficient and cost effective technologies and tools: Use of drudgery reduction technologies and tools such as hand tractors, zero tillers, serrated sickles, etc. should be considered in order to respond the increasing role of women in the agriculture sector and ensure their effective participation in livelihoods activities.

Commerce and Industry

Following the earthquakes, micro, small and medium enterprises (MSMEs) were heavily affected. Smaller businesses and enterprises, were disrupted due physical damages to premises and supporting infrastructure. Additionally, they were affected due to a lack of demand and currently by a labour market crunch. MSMEs are interlinked with other livelihoods sectors including agriculture and irrigation and tourism. Many MSMEs affected provided key agricultural services, and in certain areas were integral to the tourism. Potential programmes to support the revival of commerce and industry are as follows:

- Facilitate the capacity building of financial access systems as it is an essential component for MSMEs.
- Consider providing soft loans to targeted businesses with complementary skills trainings and development.
- Identify and support opportunities for MSMEs to diversify into the supporting construction industry considering the scale of demands, and the need for complementary businesses.

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- Assess the potential for private-public partnerships connecting enterprises with communities for targeted development.

Tourism

The tourism sector is currently facing the lowest growth in over 13 years, and reeling from the effects earthquakes and the subsequent political and economic turmoil. The tourism recovery highlights the need to restore access by rebuilding trails, and related infrastructure, restore livelihoods of those affected especially businesses in trekking areas, and building a more sustainable tourism model by strengthening destinations and promotions. The main employment opportunities emerge in rebuilding the trails and related infrastructure, however there is also a need for additional support in collaboration with other sectors. Tourism requires an integrated approach considering the impacts it has on other sectors.

- There is a need for support for owners of MSMEs and businesses along the trails in collaboration with commerce and industry. This support includes access to financial services and systems to support their rebuilding efforts, and
- Restore related crucial infrastructure for tourism - sustainable water sources, teahouses, safe houses, WASH systems.
- Link other livelihoods strategies and subsistence systems to tourism - home gardens production to meet local produce needs for tourism.
- Target the most vulnerable groups within tourism industry for skills development and trainings - porters can be a particular asset and engage in trail maintenance even during off season.
- Support livelihoods diversification opportunities for households and workers engaged in tourism - off season, and risk/ stress coping mechanisms.

Environment and Forestry

Natural resources are an essential natural asset base, and are integral to livelihoods in Nepal. Following the earthquakes, large areas of natural forests were destroyed, and their ability deliver benefits were compromised. Additionally, there was a higher risks of environmental hazards especially landslides that disrupted people's lives and livelihoods. All productive sectors depends upon the natural resources and asset base. Restoration and rehabilitation of areas needs to integrate environment assessments and protection mechanisms to ensure areas are not further damaged and degraded. Furthermore, sectors need to integrate environmentally conscious approaches.

- Recognize that natural asset base is key to livelihoods strategies in Nepal including common pool resources such as community forests, watersheds, and pastoral land.
- Rehabilitate and restore productive land damaged during the earthquake through slope management, and bio-engineering.
- Rehabilitate and restore natural water points and systems crucial for communities.
- Identify and integrate environmentally friendly/ non-polluting technologies as part of construction systems.

Employment and Livelihoods in Social Sectors

The employment and livelihoods opportunities emerging from the recovery and reconstruction process need to take into consideration the key cross cutting considerations. The following themes ensure an inclusive recovery and reconstruction support for employment and livelihoods, and integrate resilience.

Social Protection

Social protection programmes ensure vulnerable workers, households, and communities have an important safety and security net that protects them. Cash and Food for Work programming is one essential programme. However, additional programmes within the sector enable the effective provision of services and effective targeting.

Gender and Social Inclusion

Gender equality and social inclusion programming is essential for effective employment and livelihoods support. Targeted employment opportunities, and livelihood support is required to address gender, social group, and geographical location related development gaps. Targeted skills development and trainings for specifically vulnerable groups support an effective recovery and reconstruction process.

Disaster Risk Reduction

Integrating disaster risk reduction programmes is essential to ensure employment and livelihoods of people are less vulnerable, and better able to cope with and adapt to future stresses and risks. Diversifying employment and livelihoods opportunities supports workers, households, and communities in the long term by offering them alternatives and safety nets.

Employment and Livelihood

TABLE: FINANCIAL REQUIREMENTS FOR PRIORITY RECOVERY PROGRAMME

	Year	2016	2017	2018	2019	2020	Total
	Budget in Million NPR	1,470.0	1,469.3	1,175.2	881.8	881.8	9,066.0
Program							
Create employment opportunities through labour-intensive infrastructure and rehabilitation activities in disaster-affected areas		13.0	13.0	10.0	7.7	7.7	52.0
Construction of the MOLE Office building and Vocational Skills Training Centre at Lalitpur							
Labour intensive reconstruction strategy							
Mainstream child labour and occupational safety standards and non-discriminatory practices (to implementing institutions and training institutions)							
Skills provision coordination with the Ministry of Urban and Ministry of Education							
Targeted employment programme for women/elderly headed households							
Expanding employment information services to job seekers (both for national or international jobs)		46.0	45.3	36.2	27.2	27.2	181.0
Establish temporary employment services in each district							
Hire temporary staff							
Train service providers to facilitate matching skills and job							
Extend psycho social counselling to the families of migrant workers							
Skills Development for Employment and Economic Recovery (S-DEER)		1,411.0	1,411.0	1,129.0	847.0	847.0	5,645.0

Quick study on skills in demand and gaps -focusing on recovery	
Identify training in demand - new areas of work such as Aluminum fabricator	
Training of Trainers on the identified areas of work	
On-the job training to men and women on site	
Skills Development for Employment and Economic Recovery (S-DEER)	
Promoting resilient livelihoods (other sectors)	
	3,188.0
Restore food and nutrition security and rebuild community infrastructure (Housing, settlements, community infrastructure)	
Enhance government capacity to prepare for, monitor and respond to food insecurity and natural disasters (corss cutting)	
Cash grant support for livelihood activities	
Enhancing Livelihoods of Marginalized People and Earthquake Victims for Building Back Better in Makawanpur District(Agra and Tistung)	
CBDRR for Building Resilience of the Earthquake Affected Communities of Agra and Tistung of Makawanpur District	

Sector Action Plan (SAP)

ENVIRONMENT AND FORESTRY

Post-Disaster Recovery Framework, 2073



May 2016

ENVIRONMENT AND FORESTRY

1. SITUATION ANALYSIS

According to the Post-Disaster Needs Assessment (PDNA 2015), the primary damage from the 2015 earthquakes to the forest and environment sector include: (i) destruction of forest, including in protected areas (PAs); (ii) destruction of previously installed energy efficient environmentally-friendly technologies and forest based enterprises; and (iii) destruction of office buildings, furniture, equipment and other assets of the government and community institutions. Capacity of government and community institutions for forest and environmental governance was reduced; availability of basic environmental goods and services such as water, energy, fuel and timber was affected; and incomes from forest-based enterprises were lost. The earthquake also increased the risk of environmental hazards such as avalanches, floods (including glacial lake outburst floods), landslides and downstream sedimentation. The largest direct loss in terms of economic value was from loss of ecosystem services. Likely environmental impacts from reconstruction identified in the PDNA and post-earthquake rapid environmental assessment (MoSTE 2015)²⁰ include impacts of reconstructing buildings (e.g. building material extraction and brick manufacturing); solid and hazardous waste disposal; and impacts from resettlement, infrastructure and water supply reconstruction, and increased forest dependence due to loss of livelihoods. A total of NPR 32,960.3 million in damages and losses was estimated.

2. STRATEGIC RECOVERY VISION FOR ENVIRONMENT AND FORESTRY SECTOR

The recovery vision for the Environment and Forestry sector is: **to restore damaged environment and forest ecosystems to effectively deliver significant environmental, social and economic benefits**. The recovery measures laid out in this Sector Action Plan (SAP) will increase the resilience of ecosystems and vulnerable communities to future natural hazards such as earthquakes and impacts of climate change by enhancing coping capacities and fostering environmentally sustainable green and resilient recovery and reconstruction. The measures will be applied across all sectors to minimise further damage to the environment.

The following **Specific Recovery Objectives** of the SAP will contribute to achieve the above vision.

1. Key reconstruction of government and community-owned buildings following safe and resilient building standards, and provision of equipment support;

²⁰The full report can be downloaded here: http://d2ouvy59p0dg6k.cloudfront.net/downloads/rea_2.pdf

2. Restoration of ecosystem health and services in key habitats, watersheds, forests and wetlands through plantation activities, erosion and landslide control, and promotion of green and renewable substitutes to reduce future pressure on forests and environment;
3. Restoration of livelihoods of forest-dependent communities, focusing particularly on women and marginalised groups, by building back damaged forest-based enterprises and community assets, broadening access to environmental goods and services, and reviving eco-tourism in affected areas;
4. Strengthen capacities of relevant government departments, community institutions and others to plan, manage, implement, monitor and evaluate recovery; and improve capacity to deliver environmental goods and services required for reconstruction and beyond at local levels.
5. Ensure low carbon, environmentally friendly, climate resilient construction principles are applied in reconstruction across all sectors following environmental standards and required safeguards.

3. CURRENT STATUS OF ONGOING RECOVERY EFFORTS IN THE SECTOR

Following the initial urgent focus on relief and humanitarian efforts in the months following the earthquake, a number of other urgent and critical recovery actions have been initiated. These include:

- Rehabilitation and treatment of critical landslides especially those located near human settlements, using both biological and rapid engineering measures, with a total allocated budget of NPR 164 million.
- Reconstruction of 20 government buildings including District Forest Offices and Area Offices (Sector Offices) with a total budget of NPR 240 million.
- Restoration of a number of key trekking routes with a total budget of NPR 7.5 million.
- Training, guidance and awareness campaigns across several other sectors promoting the use of environmentally responsible practices in reconstruction as recommended by the Rapid Environmental Assessment (REA, 2015) with a total allocated budget of NPR 34 million.

4. EXPECTED SECTOR RESULTS AND INDICATORS

The overall result is to increase the resilience of ecosystems, environment and vulnerable communities to future anthropogenic and natural shocks from earthquakes and climate change by enhancing their management, the resilience, sustainability of ecosystems including watersheds and working with other sectors to promote sound development and reduce unsustainable impacts, in order to build back better, safer and greener. Government and community based forestry groups will have much capacity to deliver their services effectively.

The recovery programme will also contribute to build capacities, tools and skills of the key institutions in government, community and private sectors to identify, monitor and manage risks to natural ecosystem and vulnerable populations. Sustainable alternative livelihoods opportunities will be created. It will enhance the restoration of ecological functions and ecosystem through the sustainable forest management that increases the resilience of forest landscapes. The threatened

habitat for through species and ecosystem conservation and management will be improved in the PAs.

Efforts to strengthen the policy / institutional environment and support for good environmental governance will be made. Environmental assessment will be institutionalised for the project implementation. The developmental activities of all sectors will incorporate sustainable green recovery strategies for implementation of their projects.

The following key indicators will be used to measure success of the sector’s recovery plan.

Indicator	Elaboration	Source of verification
Restoration of environment and forest governance capacities	Effective restoration of environment and governance capacities (including capacity for monitoring illicit activities, malfeasance) will be critical to reduce short-term impacts and render potential for long term recovery of the sector	Field assessment; Government and CFUG reports
Incidence of landslides and extent of impact damage from landslide hazards	Treating disturbed areas, such as current landslides, landslips and fissures that have compromised stability and integrity of land masses especially near habitation, will save lives and property	GIS surveys’ Field surveys
Resumption of ecotourism and nature based tourism activities in PAs contributing to PA finance and conservation activities	Tourism revenues are not only are a major source of national income and support local communities’ economic development, but also generate much needed conservation finance. Restoration of nature based tourism facilities and infrastructure is critical to revitalize this financing mechanism.	Tourist arrivals and bookings, in particular tourist visits to national parks
Level of pollution	The large volume of reconstruction and recovery activities is expected to lead to high levels of pollution without enforcement of environmental standards and integration of environmentally sound technologies and materials.	DOE pollution monitoring reports

5. PRIORITY RECOVERY PROGRAMMES

In the short-term, the priority is to respond to immediate and urgent reconstruction needs, such as building of government and community infrastructure to enhance capacity for service delivery, and reducing threats from imminent natural hazards (e.g. landslides and their secondary effects), as well as restoring critical ecosystem services such as water and fuel wood supply. In addition the sector will focus on measures that deliver significant social benefits such as urgent needs for livelihood support to local communities, linked with strategies to reduce pressure on natural resources as recovery progresses. It will focus on managing solid and hazardous chemicals and waste, and monitoring and control of atmospheric pollutant concentrations from damaged infrastructure and brick kilns, with strengthened environmental governance as needed. It will also promote energy efficient technologies such as biogas and improved cook stoves (ICS). Long-term recovery activities will promote sound management of environmental hazards and risks including landslides and forest fires, and protection of water sources. Future recovery investments will enhance the role that healthy ecosystems, including forests, can play in increasing resilience and helping people

adapt to climate change through the ongoing delivery of a range of ecosystem services and the promotion of ecosystem-based adaptation measures.

Detailed recovery programs are described below, presented separately for the Forestry and Environment Sectors. The total budget required for recovery is NPR 28451.23 million for five years (See table 1). Out of the total, NPR 23676.23 million is estimated to support immediate and urgent recovery actions in year 1 and year 2; NPR 2725.00 million will support short-term recovery actions in years 3 and 4; and NPR 2050.00 million to support medium-term recovery actions in years 4 and 5 (See Table 2). This is an increase in total budget as compared to the PDNA estimate of NPR 3254.23 million. The increase is due to higher unit cost calculations and the inclusion of some new activities that were missed in the PDNA such as: environmental restoration of relocation areas; wetland restoration; restoration of tourism infrastructure; establishment of green corridors and community parks; and management of hazardous chemicals and waste.

1.1.Recovery Plan for the Forestry sub-sector

1.1.1. Reconstruction, repair and retrofitting of damaged office buildings and establishing green areas

The earthquake damaged 894 government office buildings (district and sector/field level offices) in the 31 earthquake-affected districts. Likewise, 740 Community Forest User Groups (CFUGs) reported destruction of their office buildings; a further 407 CFUGs reported partial damage; and 222 CFUGs reported cracks and damage. The reconstruction and repair of this physical infrastructure, with retrofitting of partially damaged structures and supply of equipment and furniture in the 31 affected districts are expected to cost NPR **4882.79 million**. The entire reconstruction and recovery plan for the sector will use a range of green options that promote water and energy efficiency of buildings and maintain vegetation cover around them. Planting of native tree species and forest protection around water sources, and the use of environmentally responsible solid waste management techniques, will improve water quality and protect water sources from landslides.

Design of government and community buildings will follow principles of green and resilient reconstruction, taking into account future seismic and other natural hazards including those from climate change. Masons and other workers trained in green and safe technologies will be recruited who will train other workers on-site, targeting vulnerable groups and women in particular. A model building using green and resilient technology will be constructed in every VDC as an example for other planned government, community and private construction. Green open spaces and memorial parks (*Smriti Baatika*) in the name of earthquake victims will be established in each district. Green corridors along the Kathmandu-Kerung and the Kathmandu-Tatopani highways, and along the Kaligandaki River, will be established to reduce the risk of landslides and floods to the highways and near-by settlements, and to add ecological value by serving as an important wildlife refuge. In addition, a number of settlements are planned to be relocated from currently unstable, risky areas to new areas. While the relocation will be undertaken by another entity, this SAP incorporates support for the greening of these relocated areas. Greening estimated costs are NPR 2850.00 million.

5.1.2 Forest management activities in damaged forests

Several damage assessments carried out post-earthquake²¹ indicated that large areas of forest were destroyed by the earthquake; the PDNA reported an estimate of 23,375 hectares of damaged forest. Methods to restore damaged forest will depend on the situation, including natural regeneration and planting of trees. Forest restoration includes the restoration of ecological functions of forests and increasing access to forest goods and services. To support restoration related plantation, permanent nursery facilities will be established to produce multi-year, climate resilient planting stock. Removal and salvage operations for fallen trees will help increase the supply of timber and firewood. Timber treatment facilities will be established to increase the durability of softwood timber in the market, hence reducing timber demand in the future. A total of **NPR 1000 million** has been budgeted for forest restoration activities including **NPR 400 million** to establish nurseries; the timber treatment facilities are expected to cost **NPR 200 million**.

Given increased demand for timber and other resources, and land for resettlement, strengthened capacity for surveillance and monitoring for illegal extraction and forest encroachment will be important in the short term. In addition building institutional capacities to address pressures and threats to forests more systematically will be important in the medium and long term.

Another important recovery activity is forest fire management. With a large number of dead trees and heavy build-up of fuel from un-removed forest debris, the forest fire hazard has increased. Fire management measures such as construction of fire breaks, prescribed burning of collected debris and enhanced monitoring should be stepped up in the short term, while integrated forest fire management which considers landscape level approaches with participation of local communities should be implemented in the medium term. A total of **NPR 155 million** has been estimated for forest fire management.

1.1.3. Landslide hazard mitigation and watershed management

Field reports and analysis of post-earthquake GIS/remote sensing imagery revealed a large number of landslides immediately following the earthquake. The most recent academic research²² mapped a total of 4,312 new landslides. In addition, numerous land cracks occurred. On slopes, the earthquake disturbed soil structure and stability which increases the risk of future landslides, especially during the monsoon. Landslides can cause huge loss of life and property, dam rivers with subsequent downstream flood risk, and cause sedimentation in rivers and floodplains. Recovery interventions need to include geo-stability assessments of cracked and disturbed land masses, while bio-engineering, soil conservation/agro-forestry measures and in some cases civil engineering should be implemented to reduce the risk of landslides. Restoration activities which manipulate forest succession and promote beneficial species are important to avoid the high risk of invasive species taking over. Recent studies²³ have indicated colonization by invasive species in such areas, often forming thickets that prevent native species from regenerating.

In the medium and long term, integrated watershed management plans should be implemented with the aim of promoting water infiltration, regulating stream flows, protecting against mass movement and buffering against climate related hazards. Likewise, sustainable land management practices that balance competing land uses to reduce negative impacts on forests and ecosystems should also be promoted. The watershed management plans to be developed will complement and build off any

²¹ Government of Nepal led PDNA (2015) and MoPE led REA (2015)

²² Kargel, J.S. et al, (2015) Geomorphic and geologic controls of geo-hazards induced by Nepal's 2015 Gorkha earthquake. Science Express. 17 Dec 2015

²³ Joshi, C. (2015). Influence of landslides on invisibility of forest ecosystems. Paper presented at the International Workshop on the Role of Land Professionals and SDI in Disaster Risk Reduction in the context of 'Post 2015 Nepal Earthquake

existing water and land use planning processes and structures within a watershed. This includes incorporation of Community Based Disaster Risk Management (CBDRM) actions already underway, and support for the expansion of such activities. Activities that will ensure the restoration of ecological functions and ecosystem services will be implemented in the medium-term, while in the long-term, this SAP will also lead to improvements in sustainable forest management that increase the resilience of forest landscapes and ecosystems to climate change and other threats, by employing proven approaches of ecosystem based adaptation (EBA) and mitigation. A total budget of **NPR 7269.44 million** has been budgeted for landslide hazard mitigation and watershed management.

1.1.4. Restoration of nature tourism infrastructure and facilities

As reported in the PDNA, there was extensive damage to tourism infrastructure, including walking trails, bridges and hotels, especially within PAs. Access to several nature-based tourism sites has been disrupted. Several PAs (e.g. Sagarmantha National Park, Langtang National Park and Annapurna Conservation Area) are world-renowned nature-based tourist destinations. The Langtang Valley is Nepal's third-busiest trekking destination. But the valley suffered some of the worst destruction during the earthquake as huge avalanches swept off the Peak of Langtang Lirung Mountain and buried the village below. Nature-based tourism contributes substantial revenue to the national economy. For example, during FY 2013-2014, of the 797,616 tourists visiting Nepal, nearly 551,680 tourists visited PAs (close to 70 percent). Tourists usually combine visits to different national parks and cultural sites. For instance, many tourists who visit Langtang also visit Chitwan National Park. As such, despite being unaffected by the earthquake, tourist arrivals in Chitwan in the following season were only around 25-40 percent of pre-earthquake numbers. Recovery efforts in the tourism sector should integrate measures to revitalise **nature tourism as a driver of economic growth in Nepal** in the affected PAs in particular, but also provide support revitalisation of this important sector in other parts of the country.

Recovery activities will include repair and reconstruction of tourist facilities such as trekking route rehabilitation, restoration of natural lakes, important visitor information centers and support to restoration of tourist accommodations such as private hotels and home-stays. Tourism facilities in and around the passes such as roads, trails, drinking water sources and supply should be rebuilt on an urgent basis while also putting in place measures to manage developments that will have an adverse impact on scenic vistas. To promote the smooth resumption of tourism activities, private sector service providers and local communities will also require capacity building on nature-based tourism while staff of PAs should be supported with training on planning and implementing wildlife conservation activities including rehabilitating habitats of key wildlife species. In the spirit of building-back-better, all rebuilt tourism facilities should incorporate green resilient principles. In addition, safe shelters for tourists and local communities will be built in the event of disasters. In the long term, it is important to establish long-term socio-ecological and environmental monitoring programs to assess impacts and undertake adaptive management. A total of **NPR 1965.00 million** is budgeted.

1.1.5. Operational support to Community Based Forest Groups

A large number of community based forest groups (including CFUGs and Buffer Zone User Groups (BZUGs)) were affected by the earthquake. In addition to the loss of several community forest group leaders and members, office buildings, equipment and furniture belonging to community based forest groups were damaged in many villages. While the reconstruction of buildings has been included under sub-activity 1, community based forest institutions will require support to carry out detailed assessments to identify and account for losses. Technical support will

be required to plan and implement measures to restore community forests. In addition there are several Leasehold Forest Users Groups (LFUGs) (including extremely poor households) who depend on leasehold forestry as their sole source of livelihood; recovery measures should include urgent support to these groups. Other support includes technical assistance to restore operational capacity by revising forest management plans. Recovery measures will support activities to enhance community capacity to manage forests, and supply timber for reconstruction. These may be incorporated into their revised management plans in the medium term. The estimated budget is **NPR 155 million**.

1.1.6. Livelihoods restoration support

Many women (52.17 percent) and men (43.83 percent) lost a major livelihood source with the damage to their community forests. Livelihood support is critical both in the short-term and medium-term to assist these groups. Support can include development of sustainable alternative livelihoods to reduce pressure on forests, and cash transfers to support livelihoods based on use and management of community forest (CF) resources. The rebuilding of community-based and nature-based tourism infrastructure, such as homestays, lodges and trails, should be supported to diversify the livelihood base and to accelerate recovery. An important activity is the construction of safe community shelters that are well equipped with amenities, for future disasters. Recovery actions should also support non-traditional forest product development. This may include skill development and training for women in sustainable harvesting of non-timber forest products (NTFPs) and the marketing of forest products to expand their livelihood base.

The linkages between the forestry and agriculture sectors are critical to successful recovery for both. Key areas of overlap include: agroforestry, climate adaptation and climate-smart agriculture; watershed and water resource management; and soil and nutrient conservation. Innovative agriculture practices which are environmentally friendly will be promoted across the agriculture sector to promote successful recovery.

Ethnic minorities are often the most dependent on forest resources; they should be included in livelihood support programs. Recovery activities should help restart damaged small and medium scale enterprises to create employment opportunities for disaster affected communities. In addition, efforts should be made to generate green jobs that can employ local people, particularly women and disadvantaged groups. This should all be linked to longer-term efforts to promote climate adaptation for local people, including ecosystem approaches. A total of **NPR 1500 million** is budgeted.

1.1.7. Restoring protected areas and biodiversity

Seven PAs were affected by the earthquakes, including Sagarmantha National Park, a sacred landscape and World Heritage Site; and two Ramsar sites (Gosaikunda and Gokyo). These PAs provide refuge to several endangered fauna of global significance such as red panda, snow leopard and musk deer. Damage to the habitats of these species has been reported. In addition, earthquake impacts in adjacent areas and local community forests will continue to have significant bearing on the management of PAs, as pressure on PA resources increases to compensate for those losses. Localised illicit activities, including the poaching of wildlife and illegal wildlife trade, may increase as several security posts were damaged and vigilance and monitoring activities were hampered. A total of **NPR 650 million** is budgeted for recovery actions related to PAs and biodiversity. Short-term activities include identification earthquake impacts on critical habitats and key species, and future risks (e.g. flooding in downstream PAs). To deter violations of PA rules and control illegal wildlife poaching and trade, regular patrolling and monitoring activities should be given priority in the short-term. In the medium term, species and habitat recovery plans will be

integrated into revised PA management plans and implemented, while in the long term, resilience of PAs, biodiversity and ecosystems to climate hazards and non-climate threats will be strengthened by incorporating climate change adaptation and DRR into PA management strategies.

Increased threats to critically endangered species such as red panda, snow leopard and musk deer are likely from the extensive damage to their habitats. Recovery actions will include ground validation of the remote sensing assessments of habitat damage, and where feasible, rehabilitation through reforestation or other activities. This includes rehabilitation of wildlife corridors. Besides being important for biodiversity conservation, the interventions will help support national economic recovery, and local recovery in areas with a high dependence on wildlife and nature tourism.

1.1.8. Gender and social inclusion targeted recovery needs

Many women and socially excluded groups, who are disproportionately more dependent on natural resources, have been particularly affected by the earthquake. Forests and conservation areas are key sources of livelihood for local communities, especially for rural women, indigenous peoples, Dalits, poor, and other groups living adjacent to forests. Loss of forests due the earthquakes means loss of livelihood assets for forest-based enterprises. The SAP will implement livelihood support and cash transfer measures for these disadvantaged groups. With the loss of nearby forests, alternative energy installations and water sources, women, responsible for taking care of livestock and household chores, will have to spend more time in collecting animal feed, water and fuel wood than before. Women's specific needs should be supported, including helping identify alternative water sources, facilitating access to forest resources and supporting women-led income generating activities. In addition, there is need to build the capacity of women and other disadvantaged groups for active participation in community based resource management, especially in light of out-migration of men. While all recovery actions under the sector will make sure to integrate a GESI focus, **NPR 500 million** has been budgeted specifically for targeted GESI plans.

5.2 Recovery Plan for the Environment sub-sector

5.2.1 Debris and waste management

According to the PDNA, almost 750,000 buildings are estimated to be totally or partially damaged, and the earthquake generated a large amount of building rubble. While much of this can be recycled or reused, a huge amount of debris and rubble will need to be transported and disposed of safely. In addition, hazardous waste was generated as a result of the earthquake including hospital waste and electrical waste. Safe and improved strategies for the disposal and management of waste, debris and rubble will be critical. Solid waste will be a medium-term priority (part of building back better); while longer term priorities include supporting legislation for environmentally sound management of waste and pollution, with improved capacity to monitor and enforce environmental regulations. A budget of **NPR 3424.00** has been estimated for this activity with an additional **NPR 210 million** specifically for management of hazardous chemical wastes.

1.1.2. Re-installation of renewable energy technologies

Renewable energy technology solutions such as improved cook stoves (ICSs) and biogas installations not only improve household health and livelihood conditions, but also significantly relieve pressure on forests. The PDNA revealed that 146,767 ICSs, 16,721 domestic biogas units and 70,000 solar power units were destroyed by the earthquake. Their urgent replacement is important both for social benefits and to prevent environmental impacts, including CO₂ emissions.

Damaged ICS and biogas plants will be repaired/replaced in two phases. In Phase I: *Immediate relief package offering domestic clean cooking* the focus will be on providing immediate cooking solutions by the end of July 2017 with a target of 100,000 ICS and 8360 biogas plants. In Phase II: *Reconstruction, rehabilitation and midterm relief solutions*, the focus will be to deliver long-term solutions for reconstruction and rehabilitation of damaged ICSs and biogas. A total of 46,767 ICSs and 8360 biogas plants will be installed by December 2018. A budget of **NPR 1800** million is required.

5.2.3 Pollution Control

Efforts to identify low carbon emission and environmentally sound means of producing and resourcing construction materials will be important, including sand, gravel and stone. It is estimated that more than a billion bricks will be required for reconstruction. Their manufacture will require coal imports that will in turn result in CO₂ and suspended particulate matter emissions, while also depleting and polluting topsoil in areas around the brick kilns, affecting agriculture and health of local communities. Chimneys of many brick kilns were damaged by the earthquake. If not adequately repaired they are likely to further increase the level of pollution. Thus measures to reduce pollution from brick production will be implemented using best available technology. At the same time, efforts will be made to identify and produce substitute construction materials that are more environmental friendly. Similarly, promotion of technological improvements in the brick industry through fiscal measures such as subsidies for technological innovations will be pursued. Fiscal incentives should also be provided to encourage import of climate smart, environmentally friendly technology in the reconstruction industry.

The SAP will establish and operate mobile and permanent stations to monitor air, noise, water and soil pollution. In the medium term, the technical and institutional capacity of the Department of Environment (DoE) under the Ministry of Population and Environment (MoPE) will be enhanced to conduct assessments, document, analyse and disseminate information on environmental hazards, while long-term needs include policy oriented research in order to promote adoption of climate smart green technologies and sustainable consumption patterns. The DoE will need to increase its institutional presence in the Districts in order to deliver decentralised environmental monitoring and quality control services effectively. A total of **NPR 1440 million** has been budgeted.

5.3 Enhanced Capacity for Environmental Governance

5.3.1 Capacity-building

In the medium term, strengthening capacity of both government and community institutions are planned, including capacity to assess and mitigate impacts of hazards (including climate risks). Likewise measures to strengthen the policy/institutional environment and support good environmental governance are paramount.

The SAP also recognises the need to expand the network of environmental institutions at regional and district level with fully equipped environmental laboratories and professional staff. Efforts to strengthen the policy and institutional environment to foster good environmental governance will be intensified. Improved mechanisms for environmental decision-making, including Environmental Management Information Systems (EMIS), and improved environmental assessment processes, will be important in the medium term. Similar importance needs to be given to increasing the capacity of government and non-government actors in line with the Strategic Environmental Assessment Strategy under development, and the Low Carbon Development Strategy which is being finalized.

Capacity building is also needed in several other sectors (including building, WASH, food security and livelihoods, roads, energy and education) for environmentally responsible practices during reconstruction, in order to minimise environmental damage and reduce risk of future disasters.

A total budget of **NPR 50.00 million** has been estimated for this activity.

6. IMPLEMENTATION STRATEGY AND RISK ANALYSIS

6.1 Implementation Strategy

Experience from elsewhere in the region indicates the following prerequisites for the smooth implementation of a SAP: (i) a well capacitated and dedicated implementation unit for handling post-disaster recovery; (ii) administrative and operational capacities of government departments to cope with the surge in demand during recovery; and (iii) local authorities and community institutions sufficiently capable to coordinate with other on-going recovery activities in their area.

Coordination, fund flow and Implementation: The overall coordination and steering of the SAP for the Forestry and Environment Sector will be led separately by the Ministry of Forests and Soil Conservation (MoFSC) and the Ministry of Population and Environment (MoPE) for their respective sub-sectors. Within the two ministries, implementation will be led by the various departments. The National Recovery Authority (NRA) will channel required funds to the respective line ministries to implement recovery activities following government procedures. Parallel off-budget resources can also be mobilized to provide technical assistance and support for specialised functions through United Nations (UN) agencies and non-governmental organisations (NGOs).

The three key departments in MoFSC (Department of Forests, Department of National Parks and Wildlife Conservation, and Department of Soil Conservation and Watershed Management) will be the main SAP implementers in the forestry sub-sector, and the Department of Environment (DoE) in MoPE will implement the SAP in the environment sub-sector. DoE will also take the lead in developing environmental mitigation plans, including environmental management guidelines, to reduce negative environmental impacts of recovery and reconstruction in other sectors involved in recovery.

These departments will be responsible for: preparing detailed recovery plans and budgets; review and revision of these plans; and their implementation in collaboration with other partners, under the guidance of their respective ministries.

Both ministries will participate in national level coordination mechanisms established by the NRA. Post Disaster Recovery and Reconstruction Management Coordination Committees (DRRMCCs) will be formed under the Secretaries of the respective ministries to provide overall sectoral and cross-sectoral coordination support, supervision and guidance, while additional human resources will be hired to support the individual departments. A joint secretary level staff within each ministry will be assigned to support the Secretary in the implementation of the SAP. At the Department level, the Director General will be responsible for overall management of the SAP, supported by a Recovery Working Group (chaired by Director General). The Recovery Working Group will assist the Director General in taking timely decisions with regard to planning, implementation, and monitoring of the SAP. The respective departments will ensure coordination with local partners such as local bodies and other government agencies/non-government partners in implementation at local level in order to foster local ownership, create synergies, and leverage available resources and expertise.

Project Implementation Unit: Each of the departments implementing recovery activities will set up a Project Implementation Unit (PIU) headed by a manager and supported by 3-4 technical/support

staff. The PIU will serve as a one-stop mechanism for day-to-day management and implementation of recovery activities in compliance with the financing, fiduciary and accountability standards set for implementation by the NRA or individual ministries. The PIU will also be responsible for regular monitoring. The PIU may establish field level implementation units within the respective district line agency offices for uninterrupted implementation of recovery activities.

Provisions for specialised support: In order to enhance capacities to deliver a large volume of recovery work, each ministry through its respective departments may recruit up to 40 short-term technical staff as local consultants or UNVs, experts, advisors and specialists, to be seconded within the ministry or departments to work with the PIU, the field/district level offices or the field units of the PIUs. Specialists and experts to be recruited under short-term contracts will come from a range of disciplines and fields such as civil engineering, architecture, earthquake-resilient and green building construction, forest and watershed management, nursery and plantation development, renewable energy and other environmentally friendly technology, ecosystems and wetland management, biodiversity and habitat management, monitoring and evaluation, social mobilisation, community empowerment, gender and social inclusion, enterprise and livelihoods, quality assurance, and information management and communication. Short-term consultants may also be hired to support administrative and procurement functions such as ensuring financial compliance and mitigating fiduciary risks, and preparing bidding and other procurement documents. Ministries may also use the services of qualified companies to provide specialised support to implement a range of recovery activities. Each ministry will play a key role in bundling recovery projects to be implemented under different departments in order to facilitate bulk procurement with competitive bidding to help maintain quality of materials and services procured for recovery work in a cost effective way.

Community groups such as CFUGs, BZUGs, LFUGs, and Conservation Area Management Committees (CAMCs), international, national local NGOs and civil society organisations (CSOs) will be involved in implementing recovery activities coordinated and led by district line agencies. Opportunities for private sector engagement in sustainable forestry and forest product management, such as technologies for improved, seasoned or treated wood products for reconstruction of buildings and infrastructure, will be explored and tapped. Similarly, partnerships with the private sector for appropriate technologies to assure quality and enhance efficiency of forest-based enterprises and skill training for local youth will be pursued.

Ensuring green recovery and reconstruction across all sectors: A blueprint for green and resilient reconstruction (with standards and codes that are resilient for earthquake and other hazards) will be developed following seismic codes and resilient standards and shared with other sectors to minimise damage to the environment during reconstruction. The design of the blueprint will be based on existing design guidelines²⁴ issued by the Ministry of Urban Development.

A green and resilient recovery and reconstruction strategy will be based on international standards of environmental safeguards that promote integrated landscape and river basin approaches and low carbon technology. It will capitalise on the value of forests as a carbon sink. Recommendations from the Rapid Environment Assessment (2015) report will be applied to minimise the negative environmental impacts during reconstruction by following principles of build-back-better in a resilient and environmentally sensitive way.

²⁴ Ministry of Urban Development (2015). Design Catalogue for Reconstruction of Earthquake Resistant Houses. Government of Nepal, MoUD, Department of Urban Development and Building Construction

Need for coordination in green and resilient recovery: At central level, MoFSC and MoPE will work closely to coordinate with other ministries and sectors, ensuring that principles of green and resilient recovery are applied during implementation of SAPs. A national recovery coordination mechanism to be set up in future under NRA will be an important conduit for this purpose. To ensure that principles of green and resilient recovery are followed by all sectors at local level, District Disaster Relief Committees (DDRCs) supported by NRA sub-national field offices should take the lead in coordinating green recovery activities at local level. In addition, local forestry groups, multi-stakeholder entities such as District Forestry Sector Coordination Committees (DFSCCs) and Agriculture, Environment and Forest Committees (AEFCs) as well as NGOs will be capacitated and mobilised to ensure this.

Engagement of local communities and the private sector: Local communities will be involved in identification and implementation of recovery projects and plans from the beginning. Reconstruction activities will be implemented in such a manner that they produce green jobs for the community where possible and promote the use of locally available construction materials, skills and construction technology.

6.2 Governance and capacity-building needs

In order to ensure smooth and effective implementation of the SAP, cross-sectoral capacities of the government ministries, departments, district line agencies and other actors working on recovery will be enhanced through training and awareness on applying green and resilient recovery principles and standards. A particular focus will be given to infrastructure, housing, water and sanitation, irrigation, and livelihoods/agriculture sectors to enable them to mainstream environmentally sound practices into their recovery work. Likewise, technical capacity of the line ministries in planning and implementation of integrated watershed management and recovery plans, landslide control measures, ecosystem restoration and water source protection will be enhanced through topical training and exposure opportunities. Local communities and institutions participating in recovery work will be trained in practical techniques for soil conservation and slope stabilisation. Local institutions, women and farmers groups will be specifically trained on Community Based Disaster Risk Management (CBDRM) approaches, construction and operation of energy efficient stoves, and climate resilient on-farm livelihood practices. Community based institutions and local authorities will be trained on strengthening environmental governance at local levels. A total of **NPR 167.1** million is required.

Table 3: Costs of implementation strategy

Item	Description	NPR	
		Rate	Total
Project implementation units in Ministry and Departments	Equipment, furnishing, etc.	15,00000	75,00,000
PIU manager and other staff	5 managers on deputation and 10 support staff on contract	-	77,000,000
Vehicle hire/purchase	2 vehicles/5 years	100000/month/vehicle	12,000,000

Office running costs	Telephone, fuel, stationeries, other misc. costs	10,00000/year	10,000,000
Consultants	8 local consultants for 30 days each	15000/day	3,600,000
Coordination meetings	At least 4 meetings/year	100000/meeting	2,000,000
Monitoring and field visits	Lump sum	10,00000/year	5,000,000
Capacity building	Trainings for government staff and communities		50,000,000
Total			167,100,000

6.3 Contributions of Forestry and Environment SAP to other sectors

The SAP will support disaster risk reduction (DRR) and resilience building through restoring ecosystems to a healthy state to ensure the reliable supply of ecosystem services. Healthy forest ecosystems in the mountains will protect water catchments from erosion, maintain ground water balance, and reduce risk of future landslides and downstream flooding. Specifically, rehabilitation of landslide sites will ensure stability and safety of human settlements, wildlife habitats and corridors and protection of water sources in the long run. Innovative early warning systems (EWS) will be established to protect communities. Further, promoting sound environmental practices across all sectors during recovery and reconstruction, such as avoidance of overexploitation of forests for timber on steep slopes, and controlled extraction of sand and gravel in the downstream areas, will reduce the risk of future disasters.

Restoration of catchments and ecosystems through tree planting, natural regeneration and soil conservation will enhance water and fuel wood supplies for women and vulnerable groups who in turn will spend less time and labor collecting them. Women were disproportionately impacted when the earthquake caused some water sources to dry up and destroyed biogas plants and ICSs, increasing their workload and time investment at the cost of other priorities. The increased availability of these resources will also help reduce gender based violence as women are at risk while out collecting supplies from forests. Reducing the work-load is particularly important for female-headed households whose men out-migrated in search of jobs after the earthquake. Likewise, some poor and marginalised households have become more dependent on forest resources for livelihood support since the earthquake impacted other sources of livelihood and income.

Implementation of the SAP will pay special attention to the needs of the poor, vulnerable and marginalised groups and women by safeguarding their rights to share benefits within community groups. Efforts will be taken to make sure they further benefit from temporary employment opportunities and Cash for Work schemes implemented for recovery activities such as landslide control (where safe and appropriate), sustainable timber harvest and repair of tourism trails.

6.4 Risk Management

Risk category	Description	Level	Mitigation measures
Uncoordinated implementation	The two ministries and line departments have limited capacity for managing construction activities. Building construction is expected to be coordinated by the Ministry of Urban Development. However, with a huge volume of reconstruction, it is unlikely to be able to provide this service to all. Besides, if recovery activities in other sectors are not informed by sound environmental practices there is high risk of many unintended adverse environmental impacts that may undermine efforts to build back better, greener and safer	High	In order to deal with a large volume of construction work, the sector proposes to bundle work together to enable hiring of experienced class A contractors. Specialist consultants /engineers will be recruited to supervise and monitor work quality. In efforts to mainstream environmentally sound measures in other sectors' recovery activities, the sector will strive to generate strong awareness through awareness campaigns, training, demonstration sites and technical support at central, district and local levels to promote sound environmental practices
Funding gaps	Large portion of the recovery plan is currently unfunded. Resources have to be mobilized both through alignment of regular government budgetary resources, recovery funds mobilized by the NRA and off-budget resources mobilized by development partners. Inadequate funding for sector recovery would result in government and community groups being unable to fulfill their functions, and hence environmental degradation, undermining efforts to increase resilience to future disasters.	High	Prioritizing funding; promotion of private sector involvement (e.g. in plantations)
Delays	Recovery in the Environment and Forestry Sector is dependent on other government line agencies – for example, building design and construction approval and support. Delays in this support will severely decrease the effectiveness of MoFSC's departments in fulfilling their functions. Delays in recovery in the environment and forestry sector will create more environmental degradation like increase landslide, increase forest fire, land degradation etc.	High	The sector implementation strategy discusses establishment of an effective inter line agency coordination mechanism through the District Disaster Coordination Committees. In addition recovery work under the sector will benefit from coordination and facilitation from the NRA field officers to coordinate with other sectors.

7. FINANCIAL REQUIREMENTS AND PLANNING

The total funding estimated for the SAP under the sector is **NPR 28451.23 million** for five years. While around 15-20 percent of this amount will be met from regular budgetary resources of the two ministries, a major share of the finance required is expected to come from the recovery fund established under the NRA. The recovery fund will be available under a multi-year budgeting

process, whereby projects with resources that cannot be expended in one year will be allowed to expend in the following year. Among the likely donor funded programs, the most advanced is the next phase of the Hariyo Ban Program supported by USAID. Other sources include multilaterals such as the World Bank, the Asian Development Bank, and the UN agencies. The sector will develop thematic project proposals or programs in areas such as integrated watershed management, restoration of ecotourism and ecosystem based adaptation programs that will be used for mobilising resources. Off-budget sources will form a critical part of this financing strategy to provide technical support to the government on reconstruction, mainly through UN Agencies.

Table 1: Detailed recovery plan

SN	Programme	Responsibility	Budget in NPR Millions					
			Year 1	Year 2	Year 3	Year 4	Year 5	Total
			12014.10	11622.13	1790.00	2175.00	850.00	28451.23
A.	Forestry							
1	Repair and construct damaged office buildings and establishing green areas	<i>DoF, DNPWC, DPR, DSCWM</i>						
1.1	Construct offices and service center		2012.00	2000.00	0.00	0.00	0.00	4012.00
1.2	Construct community based forest management offices		225.00	100.00	0.00	0.00	0.00	325.00
1.3	Furniture and equipment supports		171.26	85.63	0.00	0.00	0.00	256.89
1.4	Repair/retrofit of office buildings		188.30	100.60	0.00	0.00	0.00	288.90
1.5	Establish SMRITI BAATIKA (Community Parks)		1000.00	1000.00	0.00	0.00	0.00	2000.00
1.6	Development of green corridor (Kali Gandaki, Ktm-Kerung, and Ktm-Tatopani)		0.00	0.00	0.00	350.00	250.00	600.00
1.7	Green restoration of evacuated settlement/areas (for 25 locations)		150.00	100.00	0.00	0.00	0.00	250.00
2	Forest management activities in damaged forests	<i>DoF, DSCWM, DNPWC</i>						

2.1	Enhance permanent nursery facilities to promote climate resilient multi-year seedlings		150.00	250.00	0.00	0.00	0.00	400.00
2.2	Restoration and management of damaged ecosystem		500.00	500.00	0.00	0.00	0.00	1000.00
2.3	Establishment of wood treatment facility construction and management		100.00	100.00	0.00	0.00	0.00	200.00
2.4	Forest Fire Control and Management		100.00	55.00	0.00	0.00	0.00	155.00
3	Landslide hazard mitigation, wetland restoration and watershed management	<i>DSCWM, DPR, DoF, DNPWC</i>						
3.1	Wetland restoration and management		300.00	400.00	0.00	0.00	0.00	700.00
3.2	Landslide treatment and risk mitigation		1923.00	1900.00	0.00	0.00	0.00	3823.00
3.3	Water source protection		694.33	988.67	0.00	0.00	0.00	1683.00
3.4	Crack sealing to minimize landslide hazards		28.21	35.23	0.00	0.00	0.00	63.44
3.5	Integrated watershed management		0.00	0.00	0.00	600.00	400.00	1000.00
4	Restoration of nature tourism infrastructure and facilities							
4.1	Repair/retrofit and reconstruction at tourism sites		450.00	300.00	0.00	0.00	0.00	750.00
4.2	Road network and trail improvement		300.00	115.00	0.00	0.00	0.00	415.00

4.3	Capacity building, awareness and education programme		0.00	0.00	100.00	50.00	0.00	150.00
4.4	Drinking water source and facility improvement		200.00	150.00		0.00	0.00	350.00
4.5	Wildlife conservation activities		25.00	25.00	0.00	0.00	0.00	50.00
4.6	Safe shelters for visitors	<i>DNPWC, DoF</i>	100.00	150.00	0.00	0.00	0.00	250.00
5	Operational support to community based forest groups	<i>DNPWC and DoF</i>						
5.1	Capacity building of community for restoration of forest and ecosystem		100.00	55.00	0.00	0.00	0.00	155.00
6	Livelihood restoration support	<i>DoF, DSCWM, DNPWC</i>						
6.1	Community livelihood improvement and Income generation (Cash for work, NTFPs promotion etc)		500.00	500.00	0.00	0.00	0.00	1000.00
6.2	Support to green enterprise management and development		0.00	0.00	400.00	100.00	0.00	500.00
7	Restoring PAs and biodiversity	<i>DoF, DSCWM, DNPWC</i>						
7.1	Enhancing ecosystem based adaptation in key ecosystem		0.00	0.00	0.00	250.00	200.00	450.00
7.2	Habitat recovery and management of key wildlife species (snow leopard, musk deer and red panda)		100.00	100.00	0.00	0.00	0.00	200.00
8.	Gender and social inclusion targeted recovery needs							

8.1	Empowerment and livelihood support to vulnerable groups considering gender and social Inclusion		250.00	250.00	0.00	0.00	0.00	500.00
	Sub Total		9567.10	9260.13	500.00	1350.00	850.00	21527.23
B	Environment							
9	Debris and Waste Management							
9.1	Debris and rubble management, improvement of landfill	MoPE	500.00	500.00	0.00	0.00	0.00	1000.00
9.2	Solid waste management technology		0.00	0.00	1000.00	700.00	0.00	1700.00
9.3	Prepare environmental safety guidelines (waste management, hazardous toxic waste management etc.)		15.00	15.00	0.00	0.00	0.00	30.00
9.4	Hazardous chemical waste management		150.00	60.00	0.00	0.00	0.00	210.00
9.5	Promote research on new emerging technologies for environment promotion and safe disposal of waste		347.00	347.00	0.00	0.00	0.00	694.00
10	Re-installation of Renewable Energy Technologies	MoPE						
10.1	Repair and install ICS and Biogas units/replacement)		400.00	400.00	0.00	0.00	0.00	800.00
10.2	Subsidies and incentives for promotion of green recovery		500.00	500.00	0.00	0.00	0.00	1000.00

11	Pollution control	MoPE						
11.1	Institutional strengthening of DoE for Environmental restoration and quality monitoring		225.00	100.00	0.00	0.00	0.00	325.00
11.2	Improved brick kilns for pollution control		310.00	440.00	0.00	0.00	0.00	750.00
11.3	Air, water and noise quality monitoring stations		0.00	0.00	265.00	100.00	0.00	365.00
12	Enhanced Capacity for Environmental Governance	MoPE						
12.1	Capacity building of environmental institutions		0.00	0.00	25.00	25.00	0.00	50.00
	Sub Total		2447.00	2362.00	1290.00	825.00	0.00	6924.00

Table 2: Priority recovery actions in the environment and forestry sector

Priority	Programme	BUDGET in NPR (Million)					Total
		Immediate		Short	Medium		
		23676.23		2725.00	2050.00		28451.23
		FY 1	FY 2	FY 3	FY 4	FY 5	

		12054 .10	11622 .13	1770 .00	2155 .00	850. 00	28451 .23
Immediate (Fiscal Year 1 and 2)	1. Repair and construct damaged office buildings and establishing green areas	3746. 56	3386. 23	0.00	0.00	0.00	7132. 79
	2. Forest management activities in damaged forests	850.0 0	905.0 0	0.00	0.00	0.00	1755. 00
	3. Landslide hazard mitigation and watershed management	2945. 54	3323. 90	0.00	0.00	0.00	6269. 44
	4. Restoration of nature tourism infrastructure and facilities	1075. 00	740.0 0	0.00	0.00	0.00	1815. 00
	5. Operational support to community based forest groups	100.0 0	55.00	0.00	0.00	0.00	155.0 0
	6. Livelihood restoration support	500.0 0	500.0 0	0.00	0.00	0.00	1000. 00
	7. Restoring PAs and biodiversity	100.0 0	100.0 0	0.00	0.00	0.00	200.0 0
	8. Gender and social inclusion targeted recovery needs	250.0 0	250.0 0	0.00	0.00	0.00	500.0 0
	9. Debris and Waste Management	1012. 00	922.0 0	0.00	0.00	0.00	1934. 00
	10. Re-installation of Renewable Energy Technologies	900.0 0	900.0 0	0.00	0.00	0.00	1800. 00
	11. Pollution control	575.0 0	540.0 0	0.00	0.00	0.00	1115. 00
Short (Fiscal Year 3 and 4)	1. Capacity building, awareness and education programme	0.00	0.00	100. 00	50.0 0	0.00	150.0 0
	2. Support to green enterprise management and development	0.00	0.00	400. 00	100. 00	0.00	500.0 0
	3. Solid waste management technology	0.00	0.00	1000. 00	700. 00	0.00	1700. 00
	4. Air, water and noise quality monitoring stations	0.00	0.00	245. 00	80.0 0	0.00	325.0 0

	5. Capacity building of environmental institutions	0.00	0.00	25.00	25.00	0.00	50.00
Medium (Fiscal Year 4 and 5)	1. Development of green corridor (Kali Gandaki, Ktm-Kerung, and Ktm-Tatopani)	0.00	0.00	0.00	350.00	250.00	600.00
	2. Integrated watershed management	0.00	0.00	0.00	600.00	400.00	1000.00
	3. Enhancing ecosystem based adaptation in key ecosystem	0.00	0.00	0.00	250.00	200.00	450.00

Environment and Forestry

TABLE: FINANCIAL REQUIREMENTS FOR PRIORITY RECOVERY PROGRAMME

	Year	2016	2017	2018	2019	2020	Total
	Budget in Million NPR	12,014.1	11,622.1	1,790.0	2,175.0	850.0	28,451.2
Program							
Forestry							
Repair and construct damaged office buildings and establishing green areas							
Construct offices and service center		2,012.0	2,000.0	0.0	0.0	0.0	4,012.0
Construct community based forest management offices		225.0	100.0	0.0	0.0	0.0	325.0
Furniture and equipment supports		171.3	85.6	0.0	0.0	0.0	256.9
Repair/retrofit of office buildings		188.3	100.6	0.0	0.0	0.0	288.9
Establish SMRITI BAATIKA (Community Parks)		1,000.0	1,000.0	0.0	0.0	0.0	2,000.0
Development of green corridor (Kali Gandaki, Ktm-Kerung, and Ktm-Tatopani)		0.0	0.0	0.0	350.0	250.0	600.0
Green restoration of evacuated settlement/areas (for 25 locations)		150.0	100.0	0.0	0.0	0.0	250.0
Forest management activities in damaged forests							
Enhance permanent nursery facilities to promote climate resilient multi-year seedlings		150.0	250.0	0.0	0.0	0.0	400.0
Restoration and management of damaged ecosystem		500.0	500.0	0.0	0.0	0.0	1,000.0
Establishment of wood treatment facility construction and management		100.0	100.0	0.0	0.0	0.0	200.0
Forest Fire Control and Management		100.0	55.0	0.0	0.0	0.0	155.0

Landslide hazard mitigation, wetland restoration and watershed management						
Wetland restoration and management	300.0	400.0	0.0	0.0	0.0	700.0
Landslide treatment and risk mitigation	1,923.0	1,900.0	0.0	0.0	0.0	3,823.0
Water source protection	694.3	988.7	0.0	0.0	0.0	1,683.0
Crack sealing to minimize landslide hazards	28.2	35.2	0.0	0.0	0.0	63.4
Integrated watershed management	0.0	0.0	0.0	600.0	400.0	1,000.0
Restoration of nature tourism infrastructure and facilities						
Repair/retrofit and reconstruction at tourism sites	450.0	300.0	0.0	0.0	0.0	750.0
Road network and trail improvement	300.0	115.0	0.0	0.0	0.0	415.0
Capacity building, awareness and education programme	0.0	0.0	100.0	50.0	0.0	150.0
Drinking water source and facility improvement	200.0	150.0		0.0	0.0	350.0
Wildlife conservation activities	25.0	25.0	0.0	0.0	0.0	50.0
Safe shelters for visitors	100.0	150.0	0.0	0.0	0.0	250.0
Operational support to community based forest groups						
Capacity building of community for restoration of forest and ecosystem	100.0	55.0	0.0	0.0	0.0	155.0
Livelihood restoration support						
Community livelihood improvement and Income generation (Cash for work, NTFPs promotion etc)	500.0	500.0	0.0	0.0	0.0	1,000.0
Support to green enterprise management and development	0.0	0.0	400.0	100.0	0.0	500.0
Restoring PAs and biodiversity						
Enhancing ecosystem based adaptation in key ecosystem	0.0	0.0	0.0	250.0	200.0	450.0
Habitat recovery and management of key wildlife species (snow leopard, musk deer and red panda)	100.0	100.0	0.0	0.0	0.0	200.0
Gender and social inclusion targeted recovery needs						
Empowerment and livelihood support to vulnerable groups considering gender and social Inclusion	250.0	250.0	0.0	0.0	0.0	500.0

Sub Total	9,567.1	9,260.1	500.0	1,350.0	850.0	21,527.2
Environment						
Debris and Waste Management						
Debris and rubble management, improvement of landfill	500.0	500.0	0.0	0.0	0.0	1,000.0
Solid waste management technology	0.0	0.0	1,000.0	700.0	0.0	1,700.0
Prepare environmental safety guidelines (waste management, hazardous toxic waste management etc.)	15.0	15.0	0.0	0.0	0.0	30.0
Hazardous chemical waste management	150.0	60.0	0.0	0.0	0.0	210.0
Promote research on new emerging technologies for environment promotion and safe disposal of waste	347.0	347.0	0.0	0.0	0.0	694.0
Re-installation of Renewable Energy Technologies						
Repair and install ICS and Biogas units/replacement)	400.0	400.0	0.0	0.0	0.0	800.0
Subsidies and incentives for promotion of green recovery	500.0	500.0	0.0	0.0	0.0	1,000.0
Pollution control						
Institutional strengthening of DoE for Environmental restoration and quality monitoring	225.0	100.0	0.0	0.0	0.0	325.0
Improved brick kilns for pollution control	310.0	440.0	0.0	0.0	0.0	750.0
Air, water and noise quality monitoring stations	0.0	0.0	265.0	100.0	0.0	365.0
Enhanced Capacity for Environmental Governance						
Capacity building of environmental institutions	0.0	0.0	25.0	25.0	0.0	50.0
Sub Total	2,447.0	2,362.0	1,290.0	825.0	0.0	6,924.0

Sector Action Plan (SAP)

GENDER EQUALITY AND SOCIAL INCLUSION

Post-Disaster Recovery Framework, 2073



May 2016

GENDER EQUALITY AND SOCIAL INCLUSION

Section 1. Situation Analysis

Disasters do not discriminate amongst people. However, women, vulnerable and marginalised groups²⁵ (women; children, senior citizens, people living with disabilities (PLWD); Dalits, people living with HIV/AIDS, lesbian, gay, bisexual, transgender/transsexual and Intersexed (LGBTI) communities; and other ethnic and caste-based minorities), were disproportionately affected by the earthquakes²⁶. Recovery and reconstruction needs to be geared to achieving gender equality, advancing the rights of women and other vulnerable and marginalised groups and achieving their empowerment, and improving accessibility for people living with disabilities. More women and girls than men and boys died in the April earthquake and May aftershock, partly because of gendered roles that disproportionately assign indoor chores to women. Further, some of the affected districts (e.g. Gorkha) have a skewed female population due to male out-migration, which means women take on a larger responsibility of rebuilding sectors like agriculture and livestock. The widespread loss of food stocks, potential loss in crop productivity and loss of livestock as well as small-scale enterprises were likely to cause a severe income shock for women who rely on this sector. A narrow asset base, the burden of domestic work, limited access to economic resources combined with the lack of alternate livelihoods, also mean that recovery for women may take longer than for men who have more livelihood options. Dalits, PLWDs, and other vulnerable and marginalised groups, including people living in remote geographical regions who are already deprived of access to social services, will face similar challenges. Furthermore, disrupted social relations and displacement put already vulnerable people even more at risk of gender-based violence, especially women and girls. (PDNA Vol. A p. XI, XV, XVII).

Section 2. Strategic Recovery Vision for Gender Equality and Social Inclusion

The **strategic vision** of the cross-cutting Gender Equality and Social Inclusion (GESI) sector is to **support closing the development gaps related to gender, social group, ability or disability, and**

²⁵This document will use the definition of “women, vulnerable and marginalised groups” to include the following: women, girls and boys, senior citizens, people living with disabilities (PLWD), Dalits, people living with HIV/AIDS, lesbian, gay, bisexual, transgender/transsexual and Intersexed (LGBTI) communities; and other ethnic and caste-based minorities

²⁶ PDNA Vol. B, p. 227

geographical location, through effective mainstreaming of GESI strategies throughout the recovery and reconstruction process. This will be done **by strengthening the institutional framework and coordination; participation and representation; protection; and promoting economic empowerment.** The strategic vision builds on the Post Disaster Needs Assessment (PDNA) and has a strong orientation towards the most excluded, marginalised and vulnerable groups. GESI responsive recovery and reconstruction in line with the PDNA recommendations is only possible with the **incorporation of the GESI strategies of the Government of Nepal in all stages of recovery and reconstruction.**

The principal GESI strategies include:

- Significant participation of women, vulnerable and marginalised groups;
- An end all forms of violence against women, girls and boys;
- Provision of protective service-oriented programming for women, vulnerable and marginalised groups;
- Increasing accessibility for people living with disabilities during the reconstruction process and facilitating the access of PLWDs (both those who were living with disability prior to earthquake and who were disabled in the earthquake) to services and assistance during recovery and reconstruction; and
- Awareness-raising, capacity development and addressing the specific needs of women, vulnerable and marginalised groups.

These strategies need to be mainstreamed throughout recovery and reconstruction programming, as results cannot be achieved with stand-alone projects. The PDNA states that **women have a unique capacity to drive resilience-building of communities and that recovery and reconstruction programmes present an “opportunity to reduce the vulnerability of women and increase gender equality.”** **Women, vulnerable and marginalised groups also have knowledge, relationships and practical skills and different capabilities that are critical to post-disaster recovery.** The GESI priorities for mainstreaming across key sectors have been identified in **Annex 4.**

This strategic vision is grounded in the Constitution of Nepal, which promotes substantive equality (equality of opportunity, access and results) and non-discrimination in the public and private domain. It links to the vision of the Sustainable Development Goals (SDGs) of leaving no one behind. **Substantive equality refers to the results and outcomes of policies and laws: ensuring that they do not maintain, but rather alleviate, the inherent disadvantage that particular groups experience.**²⁷ The Constitution of Nepal has created space for transformational change, by explicitly envisioning Nepal as an “inclusive state”. It has focused on proportional representation in federal state structures and restructuring of the state from a centralised system to a federal system to end class, caste, region, disability, and gender based discriminations. The strategic vision of the GESI sector supports the national objective of Nepal to graduate from LDC status by 2022. Nepal has to some extent narrowed the gender gap in the important socioeconomic domains of education, health services, employment opportunities, and political decision-making. Improvements have also been made in eliminating practices that promote gender inequality and violence.²⁸ While disasters

²⁷ Transforming economies, realizing rights. Progress of the World’s Women 2015 -2016 Summary.

²⁸ Sustainable Development goals 2016-2030: National Preliminary Report

do not discriminate, women, vulnerable and marginalised groups were disproportionately affected by the earthquakes²⁹.

The coping mechanism of the women, vulnerable and marginalised groups can be enhanced through their meaningful participation and representation; safeguarding their rights; ending all forms of violence; and awareness-raising and capacity development to build their resilience to cope with future disasters.

Recovery and reconstruction needs to be aligned with efforts to achieve gender equality and advance women, vulnerable and marginalised groups' rights, thereby leading to their empowerment.

The Sendai Framework for Disaster Risk Reduction (2015–2030) and its Guiding Principles state that “A gender, age, disability and cultural perspective should be integrated in all policies and practices, and women and youth leadership should be promoted.” The mainstreaming of GESI in all recovery efforts across sectors can help ensure equitable, gender-sensitive, disability-inclusive, and resilient recovery agendas, which can reduce vulnerability³⁰ and ensure that there is no discrimination based on sex, age, sexual orientation, gender, class, ethnicity or ability at all its stages.

Recovery and reconstruction need to be informed by active and meaningful discussion with key stakeholders, especially women, marginalised and vulnerable groups. They have unique capacities to drive resilience-building of communities, given the right support, and should be acknowledged as change agents and leaders of the communities. Their participation in all stages of recovery vis-à-vis design, planning, implementation, and monitoring can achieve desired results that can have a long-term impact. As per the Sendai Framework (SFDRR), the adoption of principles of disability-friendly and universal design during the process of reconstruction can help to improve accessibility within the built environment, which can reduce risk exposure for both people living with disabilities (PLWD) as well as the rest of society.

For women, this is true especially in the agriculture and informal sectors, as these sectors are dominated by them.³¹ However, relative lack of opportunities, of ownership, or of access to land resources and technology acts as an impediment to their economic prosperity. Furthermore, the lack of specific attention of the recovery programmes at the local level, could contribute to the poorest sectors remaining below the poverty line.³² Therefore, all recovery efforts must provide targeted support at the local level to ensure that the poor and vulnerable do not remain below the poverty line and are not pushed further into abject poverty.³³

It is also important that the recovery and reconstruction process should pay a special attention to issues such as:

- potential increase of sexual and gender-based violence, human trafficking, child labour, and early marriage³⁴;
- an increase expected in the overall workload for women in extended economic activities post-disaster³⁵;

²⁹ PDNA Vol. B, p. 227

³⁰ Guide to Developing Disaster Recovery Frameworks. Sendai Conference Version

³¹ PDNA Vol. A, p. XXII

³² PDNA Vol. B, p. 225

³³ PDNA Vol. A, p. 62

³⁴ PDNA Vol. B, p. 233

³⁵ PDNA Vol. B, p. 218

- participation and representation of women and adolescents from different social groups, changes in social roles after the earthquake³⁶
- the specific needs and capabilities of persons living with disability, especially women, and
- Concerns of ‘minorities within minorities’.

Recovery and reconstruction should also acknowledge that the provision of legal identity is a crucial human right issue. Universal legal identity is an important cross-cutting goal to be achieved by 2030 Agenda for Sustainable Development, and is a key component of SDG 16.9. Legal identity is often described as a right, yet in practice, claiming the benefits associated with this right generally requires documentation that demonstrates or provides proof of one’s identity³⁷ and/or existence. The affected population needs such documentary proof to access recovery and reconstruction related services. Legal identity covers various identity documents, including citizenship certificates, for both adults and children. Legal identity is the recognition of a person’s existence before the law, facilitating the realisation of specific rights and corresponding duties.³⁸

³⁶ For example, newly widowed males who may suddenly have to take on the sole responsibility of parenting, childcare and household work (PDNA Vol. A, p. 61)

³⁷ Legal Identity in the 2030 Agenda for Sustainable Development: Lessons from Kibera, Kenya

³⁸ Ibid.

Section 3. Current status of on-going recovery efforts

Indicator 1	Indicator 2	Indicator 3	Indicator 4
Representation	GESI data	Access to services and information	Coordination
<ul style="list-style-type: none"> - of representation of women, vulnerable and marginalized groups in all stages (designing, planning, implementation, monitoring) - different national and local recovery mechanisms (including monitoring) 	<ul style="list-style-type: none"> - collection and reporting of GESI disaggregated data to inform recovery programming - # of affected districts that collect and utilize GESI disaggregated data 	<ul style="list-style-type: none"> - % of women, vulnerable and marginalized groups surveyed who receive information about recovery and reconstruction programme. - % of women, vulnerable and marginalized groups who have fair access to recovery and reconstruction services - % of women, vulnerable and marginalized groups surveyed who consider that their recovery needs are being addressed - # of GBV cases reported and action taken 	<ul style="list-style-type: none"> - NRA leads, coordinates and promotes accountability for the implementation of GESI commitments across the recovery and reconstruction programming - GESI issues are featured regularly in district and national level meetings - Grievances and feedback receiving mechanism: # of women, vulnerable and marginalized groups reaching to the grievance receiving mechanism - # of women, vulnerable and marginalized groups whose grievance are addressed

The initial humanitarian response to the earthquake by humanitarian actors and relevant government agencies provided immediate support for the provision of access to basic services e.g. psycho-social support including referral mechanism, awareness-raising and response to GBV, targeted interventions to the most vulnerable groups (cash transfers), livelihood support and capacity-building. However, the humanitarian response was severely disrupted due to the political problems following the promulgation of the new constitution in September 2015 and to a blockade along the southern border (Tarai region), resulting in acute shortages of essential supplies. The Post Disaster Needs Assessment committed to apply Gender Responsive Budgeting (GRB) principles and practices to all recovery and reconstruction programmes. As of April 2016, the Ministry of Finance (MoF) has sent a circular to all sectoral ministries, including National Reconstruction Authority (NRA), to adopt GRB principles in preparation of their plans. Recovery and reconstruction programmes provide the opportunity required to bridge the gap between humanitarian and development interventions. The total confirmed budget of the on-going GESI programming of 33 projects is 6,129 million Nepali rupee (NPR) (refer to Annex 1).

Section 4. Expected GESI results and indicators

For ensuring **GESI responsive recovery and reconstruction**, the following indicators are suggested:

Section 5. Priority recovery programmes

The successful incorporation of the fundamental GESI principles of the Government of Nepal in all stages of recovery and reconstruction depends on effective coordination at the national and local levels. Furthermore, the **collection of GESI disaggregated data and application of gender responsive budgeting (GRB)** is critical to identify priorities and allocate resources where

TABLE 18.5: COST OF RECOVERY NEEDS

SN	Main activities	Budget requirement (NPR)
1.	Integrated protection and support of women and girls, children, PLWD, disability and senior citizens and issues around human trafficking	121,400,000
2.	Support to prevent sexual and gender-based violence	93,100,000
3.	Support for child protection	45,750,000
4.	Support for people living with disabilities	87,000,000
5.	Support to senior citizens	30,000,000
6.	Documentation and registration of vulnerable groups	58,000,000
7.	Governance and accountability	164,260,000
8.	Construction and rehabilitation	486,000,000
Total		1,085,510,000

they are needed most.

The recovery needs have been highlighted in PDNA Vol. B, table 18.5 (also attached below) and have been reinforced by recent assessment and stakeholder consultations. The two most recent consultations with women's groups and CSOs were convened by the Ministry of Women, Children and Social Welfare (MoWCSW) and NRA respectively in March 2016.

Table 1. PDNA Vol. B, table 18.5 Cost of Recovery Needs

Annex 2 demonstrates the priorities of the planned programming related to GESI. The most urgent needs will be prioritised at the early stages of recovery and reconstruction. The priority recovery programming is as follows:

1. **Governance and accountability:** establishment of a GESI Unit at the NRA to ensure integration of GESI measures for all recovery and reconstruction and ensuring women's leadership and participation during planning, implementation and monitoring of recovery and reconstruction effects at national, regional and district level.
2. **Integrated protection and support for women and girls, children, people living with disabilities (PLWD), people living with HIV, and senior citizens and issues around human trafficking and support to preventing sexual and gender-based violence:** special conditional cash support for individual household reconstruction to be used for hiring skilled and unskilled labour; community-based psychosocial counselling, anti-trafficking and, women's leadership, participation and awareness programmes, and skill development and livelihood enhancement support;
3. **Support to PLWDs:** provision of rehabilitation centres, provision of assistive devices, provision of skill development and livelihood enhancement support, provision of equal access to education and facilities for special education, the provision of PLWD identity documents, promotion of greater accessibility for all kinds of PLWDs, and the recognition of the rights of people living with disabilities as stipulated in the UN Convention of the Rights of Persons with Disabilities (CRPD) ratified by the Government of Nepal in 2009;
4. **Construction and rehabilitation; and child protection:** construction of Women and Children Office (WCO) office buildings, children homes, safe houses for GBV survivors, rehabilitation centres for trafficking survivors, women's cooperative centres, and adolescent information and counselling centres;
5. **Support to senior citizens:** establishment of old age houses, day care centres, facilities for physical therapy and counselling, and provision of training with start-up support cost.

Programming covers the most affected 14 districts, with much of the programming taking place at the national level. A lot of the on-going programming will continue and expand in the recovery stage, according to district needs and recovery priorities. Anecdotal information has indicated that non-traditional skills development programmes, such as masonry, are still not adequately targeting women.

Section 6. Implementation and risk analysis

The implementation of GESI programming will be coordinated by the MoWCSW in close collaboration with the Department of Women and Children, and National Women's Commission for monitoring in light of its new constitutional mandate. As appropriate, MoWCSW will collaborate with the National Reconstruction Authority (NRA), Ministry of Labour and Employment (MoLE), Ministry of Education (MoE), Ministry of Federal Affairs and Local Development (MoFALD), and Ministry of Health (MoH) and Ministry of Home Affairs. For effective delivery and monitoring, collaboration with the National Planning Commission (NPC), Ministry of Finance (MoF) and finance institutions located in affected areas, development partners, and international and local civil society organisations is necessary.

The existing GRB principles for allocations and expenditure will be applied to all recovery programmes directly and/or indirectly and will be monitored by the national GRB Committee at the Ministry of Finance (please see Table 1 for GRB classification criteria). To strengthen GESI mainstreaming, the NRA should conduct an orientation on GESI issues with gender focal points and other relevant government officials, e.g. planning, budgeting, monitoring officials, in cooperation with the MoWCSW and national women commission. The same should be mirrored at the local level by local government bodies (District Development Committee (DDC) and Village Development Committees (VDC), and municipalities) in close collaboration with WCO.

Table 1. GRB Classification Criteria

No.	Indicators	Score
1	Women’s participation in formulation and implementation of the program	20
2	Women’s capacity development	20
3	Women’s share in the benefit	30
4	Promoting employment and income generation for women	20
5	Qualitative improvement of women's time use or reduced workload	10
Total		100
Directly Gender Responsive (1)	Indirectly Gender Responsive (2)	Neutral (3)
=>50%	>20% to <50%	<20 %

At the local level, the existing coordination structures e.g. District Disaster Relief Committee (DDRC), local government bodies and potentially NRA district level structures for recovery and reconstruction will be instrumental in ensuring that GESI issues are mainstreamed in recovery and reconstruction. The Women and Children Office will coordinate and advocate with these structures to mainstream GESI throughout the programming. Furthermore, the WCO, in coordination and cooperation with other relevant stakeholders, will implement GESI-specific programmes at local level. The district GRB committee will monitor the budget allocations and expenditures to ensure the application of GRB at local level.

The participation and representation of women, children, adolescents, people living with disabilities (PWLD), vulnerable and marginalised groups is critical. Programmes that promote participation and leadership of these groups must be prioritised. WCO will coordinate with relevant authorities for targeted programmes to the vulnerable communities, will mobilise women’s cooperatives, women’s committees, women’s groups, adolescent girls’ circles and children’s clubs, to ensure their participation and representation in recovery and reconstruction.

Recommendations

Based on the PDNA (volume A) key recommendations, the lessons derived from the earthquakes in Nepal by the Inter-Cluster Gender Working Group (October 2015), and on the PDRF consultation with the stakeholders including Government of Nepal (GoN) and civil society members held on 25 March, 2016, to ensure gender equality and social inclusion (GESI) in recovery and reconstruction, **the following recommendations for coordination, participation, representation and economic empowerment** are given:

- 1. Institutional framework and coordination:Incorporate gender-equitable and socially-inclusive multi-sector approaches in “Build Back Better”strategies and within Disaster**

Risk Reduction, Preparedness, Recovery and Reconstruction programming, including cash transfer programming.

- 1.1. Establish a well-resourced and clearly-articulated roles and responsibilities (TOR) GESI Unit at the National Reconstruction Authority, to ensure a sound, coordinated framework for Planning, Implementation, Monitoring and Evaluation, integrating GESI measures for all recovery and reconstruction related activities, projects and programmes.** GESI disaggregated data (eg. gender, caste/ethnicity, age, types of disabilities) should be systematically integrated in the NRA baselines, targeting and reporting systems; an analysis of their implications for programming and re-prioritising shall be regularly conducted, with the identification of follow-up actions, including local and national policy-making related to reconstruction and recovery.
- 1.2. Establish an effective mechanism for providing legal identity documents, including various documents that are the most important formal legal documents necessary for the enjoyment and exercise of one's rights (especially women, people living with disabilities, vulnerable and marginalised groups). To ensure their access to legal services and social benefits, loans should be ensured during recovery.** Legal identity documentation includes, but is not limited to: citizenship documents, passports, personal identification documents, birth certificates, marriage certificates, land ownership certificates, social security identity cards, disability identity cards, and membership of social groups such as forestry user groups, savings, credit and/or cooperative groups and earthquake victim identity cards.
- 1.3. Apply the government's institutionalised gender responsive budgeting mechanism, which aims to translate commitments to gender equality into reality for women, to all recovery and reconstruction programmes.** Monitoring mechanisms will be established to ensure that key issues are addressed, and to track progress and facilitate accountability. Gender budget audits should be a regular practice for monitoring of effective and equitable implementation of all development plans and programs, including aid effectiveness.³⁹
- 1.4. Ensure continuity of financial support across the humanitarian-development continuum.** A re-thinking of financial mechanisms should be undertaken by development partners, to bridging the gap between recovery and reconstruction, mid- and long-term development in Nepal.
- 1.5. Ensure a well-publicised, functioning and independent communication and Grievance Redress Mechanism** to support legal actions for all survivors of abuse, exploitation, deprivation or denial of the right to protection and of their equal representation and leadership in the rehabilitation process (e.g. house rebuilding). It is crucial to ensure that this mechanism is broadly publicised at both national and local levels, so that people know it exists and are informed about where and how to address their complaints. Furthermore, the Government of Nepal, in line with Right to Information Act (2007), shall raise people's awareness of existing laws and legal mechanisms (e.g. the 2011 Caste-Based and Untouchability Act). Last but not least, zero tolerance for recovery and reconstruction staff committing abuse and exploitation should be applied, with clear guidelines on measures and sanctions.

³⁹Nepal Earthquake 2015: Rapid Environmental Assessment

2. Participation and representation: Address specific needs of women, men, boys and girls equally, with an emphasis on women, vulnerable and marginalised groups, by ensuring their meaningful representation, equitable participation and leadership in all aspects of the recovery and reconstruction process.

1.1. Proportional representation should be ensured of women, vulnerable and marginalised groups, local civil society organisations advocating for women, vulnerable and marginalised groups, national women's machinery and social scientists in emergency and reconstruction bodies at the national and local levels. Further, **collaboration with women's groups, local indigenous groups, adolescent girls' circle members, children's club members, PLWDs and disabled persons organisations (DPOs), and frontline actors to promote meaningful inclusion of women's, marginalised groups', adolescent girls and children's voices in local decision making** should be prioritised. **A reference group should be formed, comprising representatives of women's rights groups and of representatives of marginalised and vulnerable groups at the national and district level, to provide technical support in addressing GESI concerns in recovery.** Participation of women should be ensured in traditionally male-dominated fields such as engineering capacity-building, including masonry and carpentry. The participation of people living with disabilities should also be ensured wherever possible, as disability is not incapability. Finally, **provision of equal opportunities and a favourable environment for women and vulnerable groups to contribute to the recovery process should be ensured, by addressing their specific needs, e.g. through provision of day care or rehabilitation centres.**

1.2. Develop a strong community outreach messaging/communication strategy to ensure that women, PLWDs and vulnerable communities are aware of available services, their rights and how they can contribute to the recovery process. The communication strategy should include clear messages that are culturally appropriate and in the local language, and should be made accessible to people living with disabilities and sensory impairments. It should be able to inform the key target groups about where to refer to, in case of violation of rights or discrimination in the course of recovery process.

3. Protection: Sustained support and monitoring of protection issues, notably gender-based violence (GBV) and violence against children, accompanied by provision of alternative livelihoods, will be crucial.

1.1. Establish transit homes to cover the first three years after the disaster, to provide temporary shelter and safe spaces.

1.2. Establish integrated mobile teams to ensure that women, adolescents, vulnerable and marginalised groups who have lost their social benefit documents and citizenship documents are able to obtain new ones or copies from the government office.

1.3. Ensure a multi-sectoral response to GBV with effective case management.

4. Economic empowerment: Recovery strategies must strive to safeguard, restore, and promote economic engagement of women, PLWDs, vulnerable and marginalised groups. A targeted package of alternative livelihoods must be promoted to build resilience in the long term. Arrangements for soft loans for women, vulnerable and marginalised groups are essential, to enable them to start their livelihoods.

- 1.1. Measures to support and promote attainment of ownership and tenure rights, together with access to social services, are crucial** to ensure that post-disaster recovery programmes do not reinforce the inequalities faced by women, vulnerable and marginalised groups. Joint ownership of land and houses between spouses should be guaranteed. Similarly, **mechanisms to support certification and registration of women, vulnerable and marginalised groups** to facilitate ownership of land and homes, and citizenship should be in place. The meaningful participation and leadership of women, vulnerable and marginalised groups in housing, settlement and community infrastructure in design and implementation stages has to be ensured. The participation of PLWDs within these processes is critical to ensure to promote greater accessibility in all aspects of design and implementation.
- 1.2. Cash transfers** to women, vulnerable and marginalised groups will be essential in order to reduce the pressure on them to resort to negative coping mechanisms.

Risk analysis

Contextual risk includes political instability, and the possibility of another natural disaster, both of which are high risk and with high impact. The **programmatic and institutional risks** for GESI and their suggested mitigation measure are detailed in the table below.

Risk	Likelihood (very unlikely/ unlikely/ moderately likely/ likely)	Impact (high/medium/low)	Mitigation measures
Programmatic			
Limited prioritizing of GESI issues during implementation and budgeting	moderately likely	High	Timely endorsement of operational guidelines on GESI (through consultative process) and application of GRB
Absorption capacity of lead government agencies	likely	High	Timely release of recovery budget in the beginning of first trimester Strengthen the capacity of government officials at local level and local gender focal points on GESI responsive recovery and reconstruction
Institutional			

<p>Limited coordination in and between national and local GESI programme implementation</p>	<p>likely</p>	<p>High</p>	<p>MoWCSW to continue strengthening the regular quarterly meeting mechanism by developing action points and follow-up</p> <p>The review of progress should be done in collaboration with (recommended) NRA GESI unit</p> <p>Local level coordination should mirror the national level coordination mechanism or should part of the established local level coordination mechanism. E.g. Chief District Officers (CDO) need to ensure the implementation of GESI at local level</p>
<p>Lack of consolidated GESI data</p>	<p>moderately likely</p>	<p>high</p>	<p>Inter-cluster gender working group and the GESI focal point/unit at NRA supports the consolidation of GESI data</p> <p>Central Bureau of Statistics (CBS) to support NRA and MoWCSW with gender and social inclusion fact sheets</p>
<p>Effective application of GRB principles at local level</p>	<p>likely</p>	<p>High</p>	<p>MoF to support NRA in ensuring the effective implementation of GRB principles at recovery and reconstruction process</p> <p>GRB principles for allocations will be monitored at the MoF and district GRB committee at the district level</p>

Less priority given to GESI and protection issues and their practical implementation	moderately likely	High	Regular engagement with civil society groups including women's groups at the national and local levels
Diversion of priorities to other sectors by donors	likely	High	MoWCSW to continue lobbying and advocating with the relevant donors to ensure long-term commitment to GESI
Limited participation of vulnerable groups and elite capture within them	moderately likely	High	District Lead Support Agency (DLSA) needs to coordinate and ensure representation of vulnerable groups and link them with district and regional NRA structures
Urban focus leading to targeting of more accessible population	moderately likely	Medium	Leverage the Right to Information Act and feedback mechanism at the NRA and ensure appropriate targeting and accountability
High turnover of government officials impacting recovery programming implementation	likely	High	Department of Women and Children needs to put in a mechanism to peer learning on the GESI priorities among the WCOs and gender focal points. In addition, systematic handover mechanism needs to be in place.

Strengthening the linkages between recovery and development financing can minimize the likelihood that affected populations will continue to be risk.

Section 7. Financial requirements and planning

The financial requirements for the next five years, as identified by districts, is 4,642 million NPR. (refer to **Annex 2 and Annex 3**). Total of 4,525 million NPR is on-budget and 117 million NPR is off-budget. The status of nine programmes is as follows: 7 ready to implement, 1 in preliminary design and 1 in pre-feasibility phase. The **establishment of GESI Unit at NRA** is a new initiative to ensure effective governance, accountability for GESI issues in recovery and reconstruction at the

national and local levels and women's leadership and participation in recovery and reconstruction efforts at all stages. **Integrated protection and support for women and girls, children, PLWD, and senior citizens, as well as issues around human trafficking and support to preventing sexual and gender-based violence** requires extensive focus in the recovery and reconstruction phase, to ensure that the special needs of women, vulnerable and marginalised groups will be incorporated, as guided by fundamental GESI principles.

Gender and Social Inclusion

TABLE: FINANCIAL REQUIREMENTS FOR PRIORITY RECOVERY PROGRAMME

	Year	2016	2017	2018	2019	2020	Total	On-budget sources	Off-budget sources	Unknown
Budget in Million NPR		1,419.0	2,142.5	798.0	140.0	142.0	4,641.5	4,525.0	117.0	-0.5
Program										
Establishment of Gender Equality and Social Inclusion (GESI) Unit at NRA (Proportional representation of women, PLWDs, other vulnerable and marginalized groups) including coordination, monitoring and ensuring accountability etc.		2.0	2.0	2.0	1.0	0.0	7.0	7.0		
Special Conditional Cash Support to most vulnerable groups (including female-headed HHs, PLWDs, elderly) to support in reconstruction of their houses (Additional Cash support for Skill and Unskilled labor).		100.0	55.0				155.0	155.0		0.0
Continuing, Extending and Strengthening Community based Psychosocial Centers (Female Friendly Spaces).		15.0	10.0	5.0	5.0	5.0	40.0	40.0		0.0
Gender based violence (GBV) and anti-trafficking programme for women, children and adolescent girls and other vulnerable groups and to support to prevent sexual and gender-based violence.		171.0	155.0	106.0	101.0	106.0	639.0	525.0	114.0	0.0
Addressing the nexus between migration and control of trafficking. Empowering Adolescent Girls and Young Women through the Provision of Comprehensive Sexuality Education and a Safe Learning Environment in Nepal (National (focus on earthquake affected districts).										
Skills Development and Livelihood enhancement support for vulnerable groups of women, adolescent girls and third gender etc for economic revival.		930.0	1,550.0	600.0	10.0	10.0	3,100.0	3,100.0		0.0
Continuing and Extending support for People living with Disabilities (PLWDs), Rehabilitation centers, Provision of accessory devices, Skills Development and Livelihood enhancement support and digitize PWLD identity cards.		20.0	20.0	17.0	15.0	15.0	87.0	87.0		0.0

Continuing and Extending the construction/new construction of Children homes, Safe houses for GBV survivors, Rehabilitation centers for Trafficking survivors, WCO offices, Women cooperative centers and Adolescent information and counselling centers etc.	170.0	340.0	58.0			568.0	568.0	0.0
Continuing and Strengthening support to Senior citizens by Establishment of old age houses, Day care centers with Skills Development and Livelihood enhancement training and start-up support cost.	10.0	9.5	9.0	8.0	6.0	42.5	43.0	
Building back better and safer for gender equality ensures that women and girls are empowered in public spaces which are free from sexual harassment and other forms of sexual violence. (Comprehensive legislation and policies to prevent and respond for sexual violence against women and girls (SVAWG) in public spaces in place and effectively implemented and Gender responsive planning with a focus on women and girls safety and security in public spaces improved in select programme districts/municipalities as a part of reconstruction efforts,)	1.0	1.0	1.0			3.0		3.0

Sector Action Plan (SAP)

GOVERNANCE



Post-Disaster Recovery Framework, 2073

May 2016

GOVERNANCE

1. Situation analysis

After the earthquake, the local authorities at the district, municipality and village levels took a lead role in managing and coordinating the relief and response across the affected districts. The CDO, as head of the District Disaster Relief Committee, brought together all the local authorities, political parties and I/NGOs at the local level to coordinate the response. The Ministry of Federal Affairs and Local Development (MoFALD) assisted the relief work at the local level through the provision of a grant of one lakh to each VDC ward and two lakhs to each municipality ward of the most-affected districts, through its Local Government and Community Development Programme. MoFALD has been working to provide temporary office structures for the VDCs.

The Ministry of Home Affairs (MoHA) and MoFALD also worked with the district and village authorities to set up systems to re-issue identity documents so that the population could access relief goods and basic services. Most of these have now been re-issued. The National Human Rights Commission set up mobile clinics, to assist the population in understanding what to expect from the relief efforts and had a grievance mechanism. This outreach programme has now ended.

Due to the heavy burden placed on the authorities at the local level, the Ministry of General Administration (MoGA) sent additional civil servants to the affected districts to augment the capacity for the coordination of the relief and data collection. Over 2,500 civil servants were deployed to the districts, including volunteer engineers and 1,300 permanent government officials from different districts and the central level.

2. Strategic recovery vision for the sector

Vision: Effective governance systems and structures at the national and local level that are responsive, inclusive, accountable and transparent, for the delivery of coordinated recovery and reconstruction services to the population, especially the most vulnerable.

Recovery should be carried out in a participatory manner with improved accountability mechanisms for basic service delivery. Support to governance functions in the recovery phase is critical for timely and effective reconstruction and recovery, but equally for the continuous delivery of other public services to local communities, including more marginalised groups and Internally Displaced Persons (IDPs) alike. The impact upon the more vulnerable populations will be particularly severe due to their lack of access to services and economic opportunities.

3. Current status of ongoing recovery efforts

The post-earthquake surge in deployment of government staffing was only for the first month. There is a great need for further human resource deployments at the local level, including VDC Secretaries, where the positions are vacant. MoFALD is currently working with the MoGA to provide further human resources to VDCs of affected districts, including engineers, accountants and social mobilisers. The Ministry of Urban Development (MoUD) is providing an additional

1500 engineers at this level. MoFALD is also working to support the municipal ward offices to set up permanent structures for the VDCs that were damaged. With UNDP support, MOFALD is preparing a Guideline for the DDCs to prepare district level recovery frameworks. Gorkha DDC is preparing its recovery framework for five years with the same support.

The Government of Nepal (GoN) is taking this recovery phrase as an opportunity to address underlying institutional weaknesses and imbalances and to ensure that the governance systems for recovery are built back better. Procedural requirements imposed on local government bodies with limited capacity and resources and other factors have resulted in “informalisation of the processes and procedures of local governance”⁴⁰. Although yet to be fully implemented, the 1999 Self-Governance Act sets out provisions to ensure that local bodies are accountable to their citizens and that there is active citizenship involvement in local democratic processes, including integrated planning processes and social audits. Human and financial capacities at the VDC level are limited, while on average, at any one time, ten per cent of the Village Development Committee Secretary posts are vacant⁴¹. Many of the newly-established municipalities are not yet fully staffed nor have they received the requisite budgets to fulfil their legal mandates.

Nepali civil society⁴² showed an immediate self-organising capacity in the aftermath of the earthquake. A broader governance strategy will seek to tie the official responsibilities of the GoN closer to the vibrant civil society that has responded with such generosity and dedication to the national disaster. The need is to plan capacity-building activities in a way that empowers and reaches out to the Nepali population including civil society organisations, established professional associations, volunteer associations, community leaders, media and the general population. This will further strengthen their relationship with the GoN in order to respond to future crises.

There are distinct gender disparities in access to education and health services, as well as a lack of representation and participation of women in governance processes. Initially, They need to be prioritised within the recovery planning framework, as the most affected areas are some of the more remote regions, which have been historically marginalised also. This support will also improve the public trust in the capacities of the state to play its role of protection for all citizens, including the most vulnerable.

4. Expected results and indicators

To support Recovery and Reconstruction, the Government of Nepal will work to strengthen governance systems, in line with the Good Governance Act of 2006, the Local Self Government Act of 1999, and the Right to Information Act of 2007, among others. These Acts set out conditions to make government authorities accountable to their citizens, as well as working towards active citizen involvement in democratic processes, including recovery planning.

The Governance section of the Post Disaster Reconstruction Framework includes programming focusing on:

- ensuring capacity development for service delivery of the government and civil society;
- strengthening coordination;

⁴⁰ Asia Foundation. 2015. Challenges and Opportunities in Municipal Governance.

⁴¹ PDNA Nepal, 2015

⁴² Civil society here means the population overall, including more organised social and economic groups, NGOs, CBOs, social interest groups, forestry user groups, mothers club, cooperatives, ethnic rights groups, Dalit groups, education groups, for example.

- managing fiduciary risk;
- improving accountability mechanisms; and
- ensuring the participation and empowerment of the entire population, especially the most vulnerable.

The government will address some of the underlying challenges to the country's governance systems, to be able to serve the recovery needs of the population. The recent adoption of a much-awaited new Federal Constitution in Nepal on September 20, 2015, along with the associated reforms of the public sector, will be a necessary step to transform the country from a relatively centralised unitary state into a federal one. It is also expected to strengthen the functioning of local bodies, the accountability and representative nature of public institutions and to reinforce social cohesion.

Objectives

- To strengthen the delivery of the recovery programme.
- To ensure that the recovery programme is implemented in a transparent and accountable manner.
- To ensure that the implementation is participatory and socially inclusive.

Results Indicators

- Rights-based service delivery recovery plans developed and implemented in 31 districts.
- 75% of affected district and village government have satisfactory audit findings.
- Multi-stakeholder Coordination mechanism at the national and local level functioning.
- 75% of the population of the 31 districts feels that the local bodies are delivering recovery services in a responsive and accountable way.

5. Priority recovery programmes

The Governance Sector of the Post-Disaster Recovery Framework focuses on four main programmatic areas:

- Building capacity for rights-based service delivery on participatory planning, procurement, engineering, data digitalisation, Ward Citizen Forums and an empowered civil society, including in particular women, youth, historically-marginalised communities and vulnerable groups in decision-making, especially those adversely affected by the earthquakes
 - Fiduciary risk management to build up internal control mechanisms and the capacity of Financial Comptroller General Office and the district treasury controller offices.
 - Coordination of the recovery initiatives at the national and local levels and clear communication between government departments and to the population
 - Strengthening accountability tools such as social audit, public audit, public hearing and promote the Right to Information (RTI) at the district and VDC and municipality levels, human rights and access to justice, and introduce third party monitoring and feedback mechanisms in the recovery process.
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5.1 Building capacity for rights-based service delivery

Local Government Bodies

In order to ensure human rights-based service delivery⁴³, temporary staffing are needed at the district level to carry out the following functions:

- Coordination of recovery –As the task of recovery is in addition to the other responsibilities that the LDO already holds, additional high-level capacity is required to coordinate all the recovery efforts at the district level. This includes working with all the Project Implementation Units (possibly in the areas of education, health, housing, community infrastructure, cultural heritage) as well as other relevant line ministries, civil society and the private sector. The recovery activities also require coordination with the NRA sub-regional office and the monitoring committees set up under the NRA.
- District level –A team of 10 staff is required at the district level (District Development Committee (DDC)) with management, financial and relevant technical skills such as planning, outreach (community mobilisation), procurement and engineering.
- Financial Management –The District Treasury Controller Office needs further capacity to support the financing of all sectoral service delivery.
- Village and Municipal level –At the level of 1000 households or more, the capacity at this level will be augmented by accountants/ book-keepers, social mobilisers and engineers to support the reconstruction of service delivery in all sectors. Vacant positions of secretaries are to be filled urgently, including with women candidates.⁴⁴

All of these new staff need to receive training. The GoN will recruit a broad mix of citizens from different ethnic groups, including women, for the new local staffing opportunities. The NRA will coordinate discussions on incentives that will attract qualified professionals for these temporary positions across all line ministries. The issue of high turnover of staff at the district, municipal and village level will be considered, in terms of capacitating these levels and the staff should remain in their posts for the allotted time to allow for sustainability.

The GoN has developed a guideline for DDCs, which focuses on the formulation of a district-level recovery framework in a participatory and inclusive manner. To work towards equality in service delivery for men, women, girls and boys as well as historically marginalised communities, rights-based service delivery will be promoted by MoFALD, the National Dalit Commission, the Women's Commission, the Human Rights Commission and the National Information Commission. Sensitisation campaigns based upon the Right to Information Act (RTI) supported by the National Human Rights Commission in collaboration with the commissions for Dalits and Women to work on the involvement of all groups and access to justice in terms of reconstruction activities through human rights clinics and legal aid will be carried out in the affected districts. Technical assistance will also be provided to DDCs to support the planning officers in their allotted role in grievance management for reconstruction activities.

⁴³ The GoN will ensure that reconstruction service delivery will be in line with human rights obligations.

⁴⁴ There are currently 81 women VDC Secretaries

Special measures are required to restore and archive lost official documents⁴⁵ related to citizenship, vital registration, land entitlement certificate, and court documents. These data sources will be digitised to safeguard the rights of the local populations. The Central Bureau of Statistics Office and district offices need to be capacitated for the collection of data for recovery planning and monitoring.

*Civil Society*⁴⁶

To work towards rights-based service delivery, space for the civil society to actively participate in the local recovery processes such as prioritisation and monitoring, should be provided. This will be done through information-sharing, supporting the Ward Citizen Forum mechanism and bringing together different groups at the village and district level. All parts of society will be empowered to take part in these processes.

5.2. Fiduciary Risk Management

Financial Management is to be strengthened at the central, district, municipal and village levels. The treasury functions will be strengthened to set up a stronger network of financial systems to check sanctions and release of funds. This will include: 1) setting up a guideline and template for expenditure reporting at this level; 2) training the central and district financial controller offices; and 3) making this a requirement for funding tranches for recovery. The GoN will develop an Internal Control Mechanism based upon their financial reforms. This will include working on the foundation of the Gender Responsive Budgeting Pilots at the village and district levels. At the national level, this is already practiced within the central ministries.

1.3. Coordination and Communication

At the district level, the capacity for coordination will need to be strengthened and agreed upon by all relevant parties. This will bring together different agencies at the district and village levels and with the population as a whole. Forums, consultative committees, and open meetings will be facilitated.

In order to promote trust between the state and society, information and communication campaigns on all recovery activities will be an important part of empowering the communities and managing expectations. At the national and local levels, public information will be provided to the local population so that men, women, girls and boys can access it, including through internet and community radio, to understand how citizens can use grievance management mechanisms so that they can have their say on issues related to transparency and inclusion, as well as the specific priorities and means of implementation of recovery. The Ward Citizens Forums (WCF) will play a key role in the information campaigns.

⁴⁵ Loss of documents have been a huge obstacle for some people to get entitlement in the relief phase. See report from ICJ and NBA <http://www.ici.org/nepal-human-rights-must-be-fully-integrated-in-post-disaster-humanitarian-assistance-new-report/>

The GON will take appropriate measures to facilitate those who most vulnerable that lost document access to relief and reconstruction allowances. Also attention should be given to the fact that many women lack ownership documents

⁴⁶ Civic society is the entire population including organised formal and informal groups as well as those that live in the affected area. This is not just aimed at Civil Society Groups but the population as a whole.

It is important to foster leadership abilities to manage the recovery and reconstruction process at the national and local level, as well as providing technical assistance to the governance processes. The National Reconstruction Authority will work with the different line ministries and political parties at the national level, while the LDO and CDO will do the same at the local level, to ensure their priorities are reflected and to create buy-in. There will be continuous dialogue and information-sharing processes set up at both levels.

1.4. Accountability

The GoN will take the opportunity of the recovery period to continue extending the decentralisation process at the local level, such as the accountability mechanisms, namely the Ward Citizen Forums and Citizen Awareness Centres (CAC), and a number of downward accountability tools that are put in place as a part of LGCDP and beyond. The MoFALD Local Body Resource Mobilisation and Management Operation Guidelines (LBRMMOG) approved by the Cabinet in 2012 include a number of critical procedures that have proven effective to promote accountability and transparency at the local level⁴⁷. The GoN is committed to implementing these mechanisms across the local bodies and district line agencies, to ensure that the earthquake recovery delivery is perceived as transparent and participatory.

The GoN has acknowledged an accountability gap at the local level, due to a number of factors, including: limited GoN staffing at the VDC level, frequent turnover of the staff, poor enforcement of the RTI, and the weak auditing practices of VDC and municipal expenditures⁴⁸. Currently audits of the VDCs and municipalities are carried out, but through the contracting of private firms.

Detailed expenditure reporting from the VDCs and municipalities is not currently a requirement for funding disbursement (from DDCs) within current GoN regulations. As these local bodies are the focus for recovery, transparent systems of reporting on financial resources will need to be strengthened. The Planning and Administration Officer in the DDC was appointed as the Grievance Officer.

To tackle the issue of accountability at the local level, the results of audit reports will be published locally and will form the basis of three-yearly public hearings at district level. In addition, MOFALD will give priority to implementing existing accountability mechanisms.

Accountability can also be improved through concurrent monitoring, third party technical audits and a stronger beneficiary tracking system. These will be published in line with the Right to Information Act. The beneficiary tracking system will build upon perception surveys and community outreach carried out in the affected districts, to assess the people's outlook towards the government's recovery efforts.

Grievance Management will be carried out through setting up third party mechanisms with the Human Rights Commission as well as with formal and informal civil society organisations. These will be provided through mobile clinics that bring together the different commissions and civil

⁴⁷ The guidelines prepared by MoFALD on social audit, public audit and public hearings should also be utilized.

⁴⁸<http://www.ekantipur.com/2011/12/23/top-story/ciaa-directs-mold-to-scrap-apm/346038.html>

society organisations connected to the National Bar Association, for people to present grievances in person. Access will also be supported by a phone network.

6. Implementation strategy and risk analysis

6.1 Implementation strategy

The governance programming under this framework will be implemented by different ministries, including the NRA, MoFALD, MoF, MoGA, Office of the Prime Minister and Council of Ministers (OPMCM), Ministry of Law, Justice and Parliamentary Affairs (MoLJPA), the National Human Rights Commission, National Planning Commission, the National Information Commission, the National Women’s Commission, the National Dalit Commission, the Central Bureau of Statistics, the Office of the Auditor General, the Financial Comptroller General Office, the DDCs, the District Administration and the VDCs/municipalities with support through technical assistance and training. The implementation arrangements of the framework will be detailed through a consultative process led by the NRA and MoFALD, but involving all relevant ministries and agencies as well as development partners and NGO. The framework is a dynamic document that sets out the overall vision; it will guide further consultations and the programming that will be shaped by the different agencies to ensure joint ownership.

Technical assistance will be provided to develop and improve the relevant governance systems. Training and coaching will be provided to the different government bodies, as well as to civil society at the central and local levels. Additional resources will be provided for monitoring systems, public outreach and coordination/ information sharing forums. It will be important to set up consultative and sharing mechanisms across the districts.

There will be periodic reviews at the village, municipality and district levels to assess implementation progress and the capacity of local bodies. This will be done through third party monitoring and surveys done by volunteers from the community and social mobilisers, as well as through discussions with the population.

6.2 Risk Analysis

Risk	Mitigation
Political influence on public finance allocation decisions	Strengthened internal control framework and empowered civil society. Central level support to the local level through the NRA, Office of the Prime Minister, Ministry of Home Affairs and MoFALD.
Heavy procedural requirements on local bodies with limited capacity and resources	Augmented staff capacity, coaching and technical assistance. Use lessons to inform structural reforms.
Different governance processes (accountability and grievance management) for each sector of the PDRF	Capacitate the NRA to take a lead coordination role at the central level and the CDO/ LDO to do so at the local level

7. Financial requirements and planning

This vitally important work to ensure more effective recovery is currently unfunded. Therefore, implementation depends on resources being allocated from development partners and the Government of Nepal to these programmes.

The National Reconstruction Authority will coordinate all the sector responses and the governance recovery programming will aim to strengthen the ability of the GoN to coordinate and implement recovery at the national, district and VDC level by capacitating the local bodies and the population. The recovery programming of different sectors should utilise the financial management, planning and accountability mechanisms that will be set up under this area of work, to ensure more coherent governance processes.

COSTING BY CATEGORIES

(Amount in Million NPR)

Categories	Amount
Building Capacity for Rights-based Service Delivery - technical assistance (temporary staff and training) in participatory planning, procurement, geology and engineering for local government bodies - Data management and digitalization of official records and documents at the local level - Empowerment of population to ensure active community participation in planning and monitoring - Promotion of Right to Information Act, grievance management, Human Rights, and legal aid services	1,390
Managing Fiduciary risk - Internal control mechanisms for recovery developed - Systems and training on budget expenditure management at the local level	125
Strengthen Accountability - Capacity development for all local bodies on the Local Body Resource Mobilization and Management Operation Guidelines (social audits, public hearings) - Public Audit	1,000
Coordination of Recovery - Public outreach on recovery activities - Technical assistance at the national and subnational levels	550
Total	3,065

Sector Action Plan (SAP)

Social Protection



Post-Disaster Recovery Framework, 2073

May 2016

SOCIAL PROTECTION

1. Situation Analysis

The earthquake had a strong and immediate negative impact on the income and consumption of households in Nepal, resulting in a greater need for social protection. Welfare analysis shows that the earthquake could cause a 20 per cent decline in average household consumption in the most affected districts. Households that were already vulnerable prior to the earthquake are more likely to experience worsened conditions.

2. Strategic recovery vision for the cross-cutting issue

The recovery strategy seeks to promote the adoption and expansion of social protection programmes to cover those affected by the earthquake, with a focus on the most vulnerable. Initiatives in the short term include the provision of cash injections through the existing cash transfer programmes to assist vulnerable groups in affected districts. In the medium term, the strategy proposes additional cash transfers, public works programme, and awareness-raising to counter human trafficking.

It is important to further strengthen systems for efficient social protection service delivery, with particular emphasis on strengthening the management information system and the disaster responsiveness social protection schemes.

In the long term, it is important to address the coverage gaps in the current social protection system and develop an integrated system, across all social protection programmes, that addresses different types of contingencies and risk management following the concept of 'social protection floors'. Moving forward, finalisation of the properly-costed National Framework for Social Protection is critical to strengthening social protection in the country.

3. Current status of ongoing recovery efforts in the sector

Following the earthquake, a few social protection initiatives were launched, mainly supported by development partners. The Government provided an Emergency Top-Up Cash Transfer Programme (ETCTP), which provided NPR 3,000 to all existing beneficiaries of MOFALD's five cash transfer schemes, with funding from UNICEF. The ETCTP helped address the immediate needs of the vulnerable population after the earthquake. An independent assessment of the ETCTP verified that the cash benefit reached 93 per cent of the intended beneficiaries, or about 434,690 people. The assessment found that the programme reached its objectives of 1) supporting vulnerable households to meet their daily needs and to some extent 2) avoid negative coping mechanisms to an extent. The independent assessment also showed that programme participants are still economically highly vulnerable. UNICEF is also funding a one-time cash transfer to all children below five years in the affected districts, to be delivered by the end of this fiscal year.

UNDP is supporting a cash-for-work programme for debris management in a few selected VDCs in Sindhupalchok and a livelihoods and community infrastructure programme. FAO is providing support to restore livelihoods of smallholder farmers in six affected districts.

Besides the one-off cash transfer from UNICEF and limited number of other programmes, there are no ongoing comprehensive social protection programmes to support the most vulnerable among the affected population.

4. Expected sector results and indicators

The expected results of the proposed programmes are as follows:

- 1.1. Increased access to social protection schemes by affected families
- 1.2. Functional MIS for management of social protection program in the affected districts
- 1.3. Increased awareness about human trafficking

Indicators:

- 1.1.1. Percentage of families benefitting from at least one social protection scheme in the affected districts
Baseline: To be determined
Target: 40% (2021)
- 1.1.2. Percentage of children aged under 5 years in the affected districts who receive cash transfers
Baseline: Only Dalit children are currently receiving
Target: 80 percent of all under 5 children
- 1.1.1. Management information system with updated household database and programme beneficiary data operationalized at the district level
Baseline: No system available
Target: Functional MIS in all affected districts (2021)
- 1.1.3. Number of people reached by awareness raising programs on human trafficking
Baseline: NA (*TBD during program implementation*)

5. Priority Recovery Programmes

The following criteria were used in prioritising the programmes listed.

- Vulnerability and need
- Potential impact to households and the local economy
- Funds committed
- Existing systems that can be scaled up.

1.1. Cash Transfer for all Children Under 5 Years of Age

As part of the post-earthquake emergency relief and recovery programme and as a follow-up to the ETCTP, the Government of Nepal and UNICEF are working to provide a single tranche cash transfer of NPR 4,000 for all children under 5 years of age (approximately 250,000 children) in the 11 most-affected districts. The objective of the cash transfer is to support households to meet the basic consumption needs of their young children during the ongoing period of recovery and reconstruction. The one-off cash transfer will follow the model of the regular Child Grant (currently provided only for *dalit* households with children under 5 years of age in the Karnali districts), but will cover all children aged under five years in the 11 most affected districts, up to a maximum of two children per caregiver. Implementation of the programme takes place in three stages. Step 1 involves a census exercise to identify all children aged under five years and pregnant women. Step 2 requires birth certificate registration and programme registration at the local government office. Step 3 involves payment of the cash grant, either in cash at the local government office or by bank transfer in some municipalities. The budget for the programme is NPR one billion, funded by UNICEF.

5.2 Cash transfer to poor and vulnerable households (targeted to the poorest 25 per cent among households in the 14 districts)

This is a programme aimed to fill a recognised gap in the current programming. A monthly cash transfer of NPR 1,000 per household to the poorest 25 percent among all households in the affected areas for six months would require NPR 1.8 billion. This could serve as an addition to the housing reconstruction grant for the most vulnerable and aid them in reconstruction. The Government is expected to soon have a complete household database of the affected districts with demographic and socio-economic data. Based on this data, a poverty and vulnerability index can be developed to identify and target households.

1.3. Cash for Work

This is an intervention that the sector team recognises as filling a gap in the current programme environment. This would address the loss of income among affected households in the earthquake-affected areas. The existing cash for work programme, Rural Community Infrastructure and Works (RCIW), could be re-targeted to also cover the earthquake-affected areas. The capacity of the RCIW's administration would have to be significantly strengthened to deliver this.

With participation from 25 per cent of households in these areas, 30 days of work rated at NPR 450 per day would cost approximately NPR 4.2 billion.

1.4. Awareness-Raising Programmes on Human Trafficking

The devastating earthquake has exacerbated people's economic vulnerabilities. Consequently, there is an increase in the push factors of migration because of the need to earn money for reconstruction and to rebuild livelihoods. Post-earthquake, the number of migrant workers, including women, seeking to leave Nepal is on the rise. There are many individuals leaving Nepal through informal and often unsafe channels, without adequate information about the destination country as well as the terms and conditions related to their work abroad. This increases the risk of exploitation and

human rights violations. The need for intensified awareness-raising programmes on the risks of unsafe migration and human trafficking is greater than ever in the 14 most affected districts.

1.5. Capacity Building for Improved Social Protection Delivery: A management information system (MIS) can underpin the modernisation of administrative systems for social protection, particularly in the case of cash transfers. The Ministry of Federal Affairs and Local Development (MoFALD) has a MIS that has been rolled out to 14 districts across the country to manage existing cash transfer schemes. Following the household registration for housing reconstruction (housing damage census), the Government will have a complete household database of the affected districts.

The MIS needs to be rolled out to the affected districts (only one of which is among the 14 districts) to improve the administration and accountability of social protection programmes and to ensure that the household database remains updated to facilitate additional social protection programmes. Rolling out the MIS in the affected districts requires both institutional capacity building and technology support. Thus, both equipment and human resources will be needed to make the MIS functional. The tentative cost for rolling out the MIS system in the 14 affected districts would amount to around NPR 100 million.

5.6 Expanded Child Grant: The social impact of the earthquake is expected to persist among households that are economically highly vulnerable. These households could be pushed further into poverty and employ negative coping mechanisms such as reducing consumption, eating less nutritious food, selling off productive assets or withdrawing children from school for an extended period of time. Literature on large-scale distress show that these negative coping mechanisms could result in long-term consequences for children. For example, children whose growth is stunted before the age of two years could suffer from poor schooling outcomes and lower earning potential later in life. To prevent serious long-term consequences, an expanded child grant is proposed in ten districts that were severely affected by the earthquake. Cash transfers to all children under five years of age could help support children's nutrition and health in this critical period of time. The expanded child grant is an investment in the country's human development and contributes to enhanced resilience of households in the case of future disasters. The expected cost of an expanded child grant in 11 districts is an average of NPR 535 million per year. It is necessary that the recurrent cost of the expanded child grant would be funded from regular government revenue after the PDRF period.

6. Implementation strategy and risk analysis

MoFALD, the Ministry of Women, Children and Social Welfare (MoWCSW), the local bodies of District Development Committees (DDCs) and Village Development Committees (VDCs) are the key implementing agencies for the Social Protection programmes identified here. All the cash transfer programmes require robust identification of eligible beneficiaries, tracking of payments and grievance mechanisms. Lack of funding and the administrative capacity of MoFALD are two key risks to successfully implementing these programmes. Except the cash transfer for all children below five years of age funded by UNICEF, none of the identified programmes currently have funds allocated.

With a complete household database of the affected districts, identification and tracking of beneficiaries is simplified. However, maintaining an updated household database will be a challenge.

As indicated above, the programme implementation will have to acknowledge several risks and should have the necessary strategies in place to minimise their impact when developing detail project proposals. The capacity of MoFALD and local bodies will have to be significantly strengthened to deliver the additional cash transfers and cash for work programmes in terms of both human and financial resources.

7. Financial requirements and planning (as per the attached template)

Rationale for cost estimate:

1. Cash transfer to poorest 25% HHs

Estimated number of eligible HHs = 309,000

Monthly benefit amount = NPR 1,000

Number of months of support = 6

Total = NPR 1,856 million

2. Cash for work for 25% of HHs

Estimated number of eligible HHs = 309,000

Daily wage rate = NPR 450

Number of days of work = 30

Total = NPR 4,176 million

Social Protection

TABLE: FINANCIAL REQUIREMENTS FOR PRIORITY RECOVERY PROGRAMME

	Year	2016	2017	2018	2019	2020	Total	On-budget sources	Off-budget sources	Unknown
Budget in Million NPR		4,634.0	2,576.0	548.0			7,758.0		20.0	7,738.0
Program										
Priority 1: Cash transfer to poor and vulnerable HHs (Bottom 25 % from HH in the 14 affected districts)		1,856.0					1,856.0			1,856.0
Priority 2:Cash for work		2,176.0	2,000.0				4,176.0			4,176.0
Priority 3: Awareness-Raising Programmes on Human Trafficking		10.0	10.0				20.0		20.0	40.0
Priority 4: Awareness-Raising Programmes on Human Trafficking		30.0	40.0	30.0			100.0			100.0
Priority 5: Expanded child Grant		562.0	526.0	518.0			1,606.0			1,606.0

ANNEX: PDRF SECTOR LEADS AND TEAM COMPOSITION

PDRF Sector leads and Team composition

	Components/ Sectors	Sector lead Ministries	NRA Division and Focal Point	Govt. Focal Points Contact details	Sector lead Development Partner	DP Sector Team Experts	DP Focal Points Contact details
Primary Components							
1	Policy	NPC Tulasi Prasad Gautam, (JS) Sagar Acharya, Programme Director, HR Division	Sushil Gyewali, CEO, NRA (TBC)	NPC tpgautam@npc.gov.np tpr_gautam@yahoo.com mrsagaracharya@yahoo.com	UNDP Krishna Vatsa	UNDP: Seeta Giri Shairi Mathur USAID: Kishore KC	Krishna.vatsa@undp.org Seeta.giri@undp.org Shairi.mathur@undp.org KishoreKC@usaid.gov
2	Institutional Framework	NPC Tulasi Prasad Gautam, (JS) Sagar Acharya, Programme Director, HR Division	Sushil Gyewali, CEO, NRA (TBC)	NPC tpgautam@npc.gov.np tpr_gautam@yahoo.com mrsagaracharya@yahoo.com	World Bank Nigel Fisher		nfisher@konterragroup.com
3	Financial	MoF NPC Lal Bahadur Khatri Under Secretary	Dr. Bhisma Kumar Bhusal Under-Secretary	NRA bbhusal@nra.gov.np NPC lkhatr@mof.gov.np	World Bank Sudymna Dahal	IOM: Giuseppe Savino USAID: Kishore KC CNI: CA Anal Raj Bhattarai	sdahal1@worldbank.org KishoreKC@usaid.gov gsavino@iom.int rbajracharya@worldbank.org (CC only) bhattaraiar@gmail.com ; 9851010901

	Components/ Sectors	Sector lead Ministries	NRA Division and Focal Point	Govt. Focal Points Contact details	Sector lead Development Partner	DP Sector Team Experts	DP Focal Points Contact details
4	Implementation, Communications and M&E	CBS MoFALD Yuvraj Katel SD NPC Tulasi Prasad Gautam, (JS) Sagar Acharya, Programme Director, HR Division	Sushil Gyewali, CEO, NRA (TBC)	MoFALD yubaraj.katel@gmail.com ; 9841527299 NPC tpgautam@npc.gov.np tpr_gautam@yahoo.com mrsagaracharya@yahoo.com	UNDP Seeta Giri	IOM: Zhu Ying UNDP: Krishna Vatsa USAID: Kishore KC WB: Sudyumna Dahal CNI: Ananada Subedi	Seeta.giri@undp.org Krishna.vatsa@undp.org zying@iom.int KishoreKC@usaid.gov sdahal1@worldbank.org anand.subedi@hotmail.com ; 9851041573
	Sectors						

	Components/ Sectors	Sector lead Ministries	NRA Division and Focal Point	Govt. Focal Points Contact details	Sector lead Development Partner	DP Sector Team Experts	DP Focal Points Contact details
1	Housing and Settlements (Rural), Community Infrastructure	<p>MoUD Shivahari Sharma (JS) Suman Salike</p> <p>MoFALD Purnachandra Bhattarai (JS) Prakash Dahal Guru Prasad Sharma Ramkrishna Lamichhane Jivan Guragai (Community Infra)</p> <p>MoLRM Nagendra Jha, (JS)</p>	<p>Rural Housing and Infrastructure: Dr. Chandra Bahadur Shrestha</p> <p>Ghan Shyam Gautam, SDE</p>	<p>NRA cbsrestha@nra.gov.np gsgautam100@gmail.com</p> <p>MoUD waglesh@hotmail.com; 9851056699 sumansalike@yahoo.com</p> <p>MoFALD Pd2035@gmail.com; 9851184526 sharma.guruprasad@yahoo.com; 9851183222 ramkrishna100@gmail.com 9851169481 drsp@dolidar.gov.np guragaj@gmail.com 9851150100</p> <p>MoLRM Nagendra Jha: 9841298413</p>	World Bank Avani Dixit	<p>Housing JICA: Ghazala Naeem DFID: Gareth Weir; Leonard Tedd IOM: Jitendra Bohara; Raja Arshad Rashid; Keisuke Kamiya UNDP: Vivek Rawal USAID: Laura Chapman, Laureen Reagan UN-HABITAT: Arjun Koirala WB: Maggie Stevensen UNV: Martina Voss CNI: Birendra Raj Pandey HRRP: Loren Lockwood; Raja Arshad Rashid Tear Fund: Sushil Poudel LWF: Gopal Dahal</p> <p>Community Infrastructure: UNDP: Vivek Rawal UNOPS: Komal Karki; Dominic Grant UNV: Martina Voss WFP: Selwyn Heaton PAF: Chhabi Pokhrel</p>	<p>avanimanidixit@worldbank.org ghazala_ghq@hotmail.com g-weir@dfid.gov.uk l-tedd@dfid.gov.uk jbohara@iom.int RARASHID@iom.int kkamiya@iom.int vivek.rawal@undp.org lchapman@usaid.gov Arjun.koirala@unhabitat.org.npmaggie@mestephenson.org mstephenson@worldbank.org martina.voss@undp.org birendra.pandey@nepaladarsha.com.np ; 9801138828 lreagan@usaid.gov loren.lockwood@crs.org arshid@hrrpnepal.org nepal-shelter@tearfund.org tl@lwf.org.np</p> <p>Community Infrastructure: vivek.rawal@undp.org KarkiK@unops.org Dominicg@unops.org martina.voss@undp.org selwyn.heaton@wfp.org cpokhrel@pafnepal.org.np</p>
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	Components/ Sectors	Sector lead Ministries	NRA Division and Focal Point	Govt. Focal Points Contact details	Sector lead Development Partner	DP Sector Team Experts	DP Focal Points Contact details
2	Water and Sanitation	MoWS Tej Raj Bhatta, Joint Secretary, MoWS/ Planning Division Deepak Puri, MoWS Mahesh Bhattarai, KUKL Bhupendra Aryal, Fund Board Kabindra Karki, MoWS Rajit Ojha, DWSS Hari Prasad Timilsina, MoWS Kiran Acharya, MoWS MoFALD		NRA cbsrestha@nra.gov.np gsgautam100@gmail.com MoWS dpuri2017@gmail.com aryal.bhupendra@gmail.com hmtimilsina@yahoo.com itsmerajeet@gmail.com kiran_ach1@hotmail.com kb.karki@gmail.com MoFALD	Embassy of Finland Jukkallomäki WB: Silva Shrestha; Guna Shrestha	UNICEF: Arinita Shrestha UNHABITAT: Sudha Shrestha DFID: Gobinda Neupane Practical Action: Dr. Shirish Singh World Vision: Novel Tamba Dan Church Aid: Pabitra Gurung PAF: Dinesh Poudel	Jukka.Ilomaki@formin.fi sshrestha6@worldbank.org gshrestha@worldbank.org amaskeyshrestha@unicef.org Sudha.shrestha@unhabitat.org.np G-Neupane@dfid.gov.uk shirish.singh@practicalaction.org.np catherine_green@wvi.org pagu@dca.dk Dinesh.poudel@pafnepal.org.np

	Components/ Sectors	Sector lead Ministries	NRA Division and Focal Point	Govt. Focal Points Contact details	Sector lead Development Partner	DP Sector Team Experts	DP Focal Points Contact details
3	Environment & Forestry	MoEv MoFSC Krishna Prasad Acharya, (JS) Pashupati Koirala, (US) Prakash Lamsal, (US) Dhurendra Pradhan, (US) Amir Mharjan, (US)		NRA cbshrestha@nra.gov.np gsgautam100@gmail.com MoEv MoFSC kpacharya1@hotmail.com koiralapn@gmail.com	UNDP Doley Tshering	UNDP: Vijaya Singh	Doley.tshering@undp.org Vijaya.singh@undp.org

	Components/ Sectors	Sector lead Ministries	NRA Division and Focal Point	Govt. Focal Points Contact details	Sector lead Development Partner	DP Sector Team Experts	DP Focal Points Contact details
4	Transport and Access, and Communications	MoPIT Devendra Karki, Joint Secretary Rabindra Shrestha, DDG Gambhir Shrestha, CDE Laxmidutta Bhatta, CDE Mukunda Lamichhve (Er.) MoFALD Maheshwar Ghimire MoIC Rudra Devi Sharma, (US) Badrinath Gairr, Director Santosh Kumar Khatri (SO)		NRA cbshrestha@nra.gov.np gsgautam100@gmail.com MoPIT erdevendrakarki@hotmail.com gambhir@dor.gov.np gambhirkm@yahoo.com MoFALD maheswor2015@gmail.com ; 9841256306 MoIC Rudra Devi Sharma (US) – 9841222000 rudradevi@moci.gov.np Badrinath Gairr, Director 9841902455 gairhebadri@gmail.com Santosh Kumar Khatri (SO) – 9841681956 santosh@moic.gov.np	ADB Gagan Raj Rai/ Naresh Giri	WB: Farhad Ahmed WFP: Dorothy Hector (information contact) MAF: Jennifer Bottrell	grai@adb.org ngiri@adb.org Dorothy.hector@wfp.org jbottrell@maf.org

	Components/ Sectors	Sector lead Ministries	NRA Division and Focal Point	Govt. Focal Points Contact details	Sector lead Development Partner	DP Sector Team Experts	DP Focal Points Contact details
5	Commerce and Industry	MoI Dinesh Ghimire (JS)	Rural Housing and Infrastructure: Dr. Chandra Bahadur Shrestha Ghan Shyam Gautam, SDE	NRA cbshrestha@nra.gov.np gsgautam100@gmail.com MoI Gmrdinesh@gmail.com ;	ILO Saloman Rajbanshi	DFID: Rabi Rayamajhi	saloman@ilo.org R-Rayamajhi@dfid.gov.uk
6	Electricity and Renewable Energy	MoEn Dinesh Kr. Ghimire, (JS) Chiranjiri Chataut Gopalbabu Bhattarai Pyaru Rana MoLRM Nagendra Jha, (JS) MoPE AEPC Nawa Raj Dhakal		NRA cbshrestha@nra.gov.np gsgautam100@gmail.com MoE Dinesh Ghimire (JS) – 985118119 dkgmowr@hotmail.com pyarurana@gmail.com ; 9841216549 MoLRM Nagendra Jha: 9841298413 MoPE Nawa.dhakal@aepc.gov.np ; nrdhakal@yahoo.com	World Bank Rabin Shrestha	WB: Ashish Shrestha Practical Action: Vishwa Amatya	Rshrestha2@worldbank.org ashrestha1@worldbank.org vishwa.amatya@practicalaction.org.np

	Components/ Sectors	Sector lead Ministries	NRA Division and Focal Point	Govt. Focal Points Contact details	Sector lead Development Partner	DP Sector Team Experts	DP Focal Points Contact details
7	Housing and Settlements (Urban)	MoUD Shivahari Sharma, (JS) MoFALD MoLRM Nagendra Jha, (JS)	Urban Housing and Heritage: Dr. Dhruva Sharma Shriji Pradhan, Deputy Director, NRA	NRA dhrbsharma@gmail.com MoUD waglesh@hotmail.com ; 9851056699 sumansalike@yahoo.com MoFALD MoLRM Nagendra Jha: 9841298413	UN-HABITAT Om Dharananda Rajopadhyaya	UN-HABITAT: Padma Sunder Joshi; Bhushan Tuladhar DFID: Gareth Weir; Leonard Tedd UNDP: Vivek Rawal UNOPS: CNI: Birendra Raj Pandey	om.rajopadhyaya@unhabitat.org.np ps.joshi@unhabitat.org.np bhushan.tuladhar@unhabitat.org.np g-weir@dfid.gov.uk l-tedd@dfid.gov.uk vivek.rawal@undp.org birendra.pandey@nepaladarsha.com.np ; 9801138828
8	Cultural Heritage	MoCTCA Dandu Raj Ghimire, (JS) Damodar Gautam; Chief Archaeology Officer; Dept. of Archaeology		NRA dhrbsharma@gmail.com shriju.pradhan@gmail.com ; 9851088747 MoCTCA ghimiredandu@gmail.com damodar79476@yahoo.com ; 9849595551	UNESCO Thomas Schrom/ Nipuna Shrestha		thomas_schrom@yahoo.com s.nipuna@unesco.org ; 9851131752

	Components/ Sectors	Sector lead Ministries	NRA Division and Focal Point	Govt. Focal Points Contact details	Sector lead Development Partner	DP Sector Team Experts	DP Focal Points Contact details
9	Health and Nutrition	MoH Mahendra Chrestha, (JS) Jhalak Sharma (SPHA) Lilaraj Poudel (US) Rishiram Pangepi (US) Shushil Nepal (CO) Pradip Adhikari (PO)	Public Buildings: Dr. Hari Ram Parajuli	NRA hparajuli@nra.gov.np hariparajuli@ioc.edu.np MoH jhalaksharmapaudel@gmail.com (9857062988) prad.237@gmail.com subedi.giriraj@gmail.com	WHO (Health) Dr. Reuben Samuel UNICEF (Nutrition) Anirudra Sharma	IOM: Bishwa Rai UNFPA: Dr. Shilu Adhikari UNICEF: Chahana Singh WFP: Madhav Shivakoti World Vision: Moniek Kindred	samuels@who.int ansharma@unicef.org adhikarid@who.int birai@iom.int sadhikari@unfpa.org csingh@unicef.org madhav.shivakoti@wfp.org catherine_green@wvi.org

	Components/ Sectors	Sector lead Ministries	NRA Division and Focal Point	Govt. Focal Points Contact details	Sector lead Development Partner	DP Sector Team Experts	DP Focal Points Contact details
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