Executive Summary

1.1. The Government of Nepal's prompt action in response to the 2015 earthquakes highlights the value of investment in preparedness. It also underscores the government's experience in responding to multiple hazards. One indication of the scale of the challenge posed by the 2015 earthquakes is that Nepal's consideration for graduation from the United Nation's least developed country category has been deferred to allow further time for recovery.

1.2. The scale of the 2015 earthquakes' damage (estimated at one third of GDP) posed a challenge to the government's disaster response capabilities. Shortcomings were revealed in trade connectivity, most notably in airport and road capacity – limitations that also constrain growth prospects in key growth sectors such as tourism in more normal times. Where problems arose in disaster response, these appear to have been linked to ill-adapted border clearance regulations and relief actors seeking to work outside official channels. Unsolicited bilateral donations, the legal status of some relief providers and recognition of professional qualifications were among issues cited.

1.3. Growth in the building and construction sector has driven post-earthquake economic recovery. More than half of damage wrought by the earthquake was incurred in the building and housing stock. Rates of insurance coverage were low. The fiscal burden for reconstruction has fallen to the government and development partners.

1.4. Housing grants offered by the government have boosted demand in the building and construction sector. The grants are also advancing a "build back better" agenda to better manage future seismic risk. In turn, these grants have stimulated investment in manufacturing capacity (e.g. cement production) and skills (e.g. development of appropriate building training and inspection skills). However, imports of construction materials have contributed to the trade deficit and to wage appreciation in the construction sector which has put further pressure on a manufacturing sector struggling to secure sufficient labour.

1.5. A defining feature of the Nepalese economy is labour migration. Income remittances jumped to 14.3% in the year of the earthquakes to reach US$6.7 billion, clearly underscoring the value of remittances as a social safety net. Labour migration and the level of remitted income have subsequently slowed, which has in turn put pressure on government spending. With remittances no longer able to cover imports, the current account has gone into deficit reaching US$737 million in the first six months of FY2018.

1.6. Nepal's future disaster resilience would be strengthened by greater trade connectivity, both domestically and regionally. Airport capacity in Kathmandu, the only international airport, is reaching its limit and was a key bottleneck in disaster response. Government investment plans for both air and road connectivity should have positive effects on both trade connectivity and disaster resilience.

1.7. A further critical element in disaster resilience is predictable trade relations with regional partners. Nepal's economic prospects are closely intertwined with those of its southern neighbour. The disruption that occurred to essential supplies delayed recovery and underscores the centrality of security of transit as a factor in Nepal's resilience.
Introduction

1.8. Nepal's most serious constraint is its geography. On the one hand, trade and transit costs are higher for Nepal as it is a landlocked country. On the other hand, Nepal's difficult terrain due to geophysical features of high mountains and hills adds to the costs of developing infrastructure, promoting production, and doing business. The terrain also gives rise to a series of natural hazards, of which the most important in their economic impact are earthquakes and floods.

1.9. The services sector constitutes the backbone of the Nepalese economy in terms of GDP share (57.6% in 2017-18), followed by agriculture and related activities (27.6%), construction (7.6%), and manufacturing (5.4%). It is estimated that the agriculture sector employs over two thirds of workers.

1.10. Trade (exports and imports of goods and services) accounted for 52% of GDP in FY2016-17. The Nepalese economy is highly trade-oriented and dependent on remittances (around 26% of GDP in FY2016-17), and exports of goods and services (about 9% of GDP), particularly travel and tourism (some 4% of GDP).

1.11. Nepal started to liberalize its trade and investment regime, unilaterally, in 1992 and became a WTO Member on 23 April 2004. Nepal liberalized its economy in the expectation that economic reform and trade liberalization would attract investments, promote development and, contribute to generate productive employment and alleviate poverty, in a general framework of equity, participation and market-based efficiency. Accession to WTO was an essential component of the country's integration into the world economy.

1.12. Nepal's annual growth averaged 4.3% in the period 2007-2017, during which time the agricultural and non-agricultural sectors grew at yearly average rates of 2.9% and 4.9%, respectively. Positive economic growth has doubled the size of the Nepalese economy as measured in Nepali rupees (NPR), from just over NPR 1.5 trillion in 2012 to NPR 3 trillion today.

1.13. Per capita income at the time of WTO accession was US$240, with 38 per cent of the population living with less than one dollar a day. GDP per capita increased to US$708 in FY 2012-13 to US$1,004 in FY 2017-18. Poverty alleviation is still a major challenge, with nearly six million Nepalese living in poverty out of a total population of some 30 million.

1.14. Nepal is a least developed country (LDC). The Government's vision is to graduate from LDC status by 2022 to become a middle-income country by 2030. Nepal meets two of the three UN Committee on Development Policy (UNCDP) criteria for LDC graduation: the human assets index and economic vulnerability index criteria. The graduation pathway can be engaged when two of the three criteria are met. Nepal was considered for graduation for a second time at the UN CDP triennial review meeting in March 2018.

1.15. At the UN CDP triennial review meeting held in March 2018, progress on GNI per capita was noted, but also that Nepal remained below the LDC graduation threshold. Nepal's economic vulnerability index score worsened due to the devastating earthquake in 2015, reflecting the high vulnerability of the country to natural disasters. As such, the Committee deferred a decision on Nepal's graduation to the 2022 triennial review, when it will again assess the sustainability of the country's development progress and graduation readiness. The Committee has decided to devote attention to the volatility of remittances, which have been critical for providing resources for improving human assets. It will also monitor possible long-lasting impacts of the 2015 earthquake followed by border obstruction at the southern part of the country. The deferment will provide

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**Box 1: LDC graduation process**

The Committee for Development Policy (CDP), a subsidiary body of the UN Economic and Social Council, is mandated to review the category of LDCs every three years. In the review process, the Committee determines threshold levels on each of the three criteria to identify the countries to be added to or graduated from the category. Thresholds for graduation are higher than those for inclusion. The identification and graduation of LDCs is based on three criteria:

1. **Income criterion**, based on a three-year average estimate of GNI per capita for the period 2011-2013 using the World Bank Atlas method with under $1,035 for inclusion, above $1,242 for graduation (as applied in the 2015 triennial review).
2. **Human Assets Index** (HAI) based on indicators of: (a) nutrition: percentage of population undernourished; (b) health: mortality rate for children aged five years or under; (c) education: the gross secondary school enrolment ratio; and (d) adult literacy rate.
3. **Economic Vulnerability Index** (EVI) based on indicators of: (a) population size; (b) remoteness; (c) merchandise export concentration; (d) share of agriculture, forestry and fisheries; (e) share of population in low elevated coastal zones; (f) instability of exports of goods and services; (g) victims of natural disasters; and (h) instability of agricultural production.

To become eligible for graduation, a country must reach the threshold levels for graduation on at least two of the three criteria, or its GNI per capita must exceed at least twice the threshold level ($2,484), and the likelihood that the level of GNI per capita is sustainable must be deemed high.

After an LDC has become eligible for graduation for the first time, an ex-ante impact assessment and a vulnerability profile are produced. To be recommended for graduation, a country must be found eligible at two successive triennial CDP reviews. A country graduates from the LDC category three years after the UN General Assembly takes note of the Economic and Social Committee endorsement of the CDP graduation recommendation. During this three-year period, the country remains on the list of LDCs. A smooth transition strategy is implemented after graduation.\footnote{Criteria for identification and Graduation of LDCs, UN Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States. Viewed on 14 November 2018. Available at: http://unohrlls.org/about-ldcs/criteria-for-ldcs/}

Sources: UNOHRLLS and UNCDP

1.16. In addition to the various crises that have affected the economy since 2000, Nepal's trade performance is limited by inadequate economic, social, and trade-related infrastructure. Challenges include in the areas of road infrastructure, vocational and technical education and certification mechanisms.\footnote{Trade Policy Review Report by Nepal, 8 October 2018, WT/TPR/G/381, World Trade Organization} Nepal is committed to overcoming trade-related infrastructure challenges to fully utilize its export potential and productive capacity. This would require significant investments.\footnote{Trade Policy Review Report by Nepal, 8 October 2018, WT/TPR/G/381, World Trade Organization}

**Exposure to geophysical and meteorological hazards**

1.17. The geophysical location in one of the highest seismic risk areas, and propensity to flash floods and landslides due to steep, unstable slopes are some of the natural factors that contribute
to Nepal's high vulnerability to natural hazards.\textsuperscript{12} Nepal scores highly on the Inform Country Index for Risk Management (INFORM) which is a composite indicator that identifies countries at risk with a composite figure of 5.0 out of 10 (consisting of hazard and exposure, vulnerability and lack of coping capacity). Some of the scores for specific risks are very high. For example, for the score for exposure to earthquakes (9.9 on a scale out of 10) and exposure to floods (6.8 out of 10).\textsuperscript{13}

1.18. The vulnerability of the population in Nepal is a result of an interplay between low per capita income, poverty incidence, high rural population where poverty rates are higher and is compounded by the rugged terrain in the middle and high mountains that is home to almost half of the total population. The monsoon period from June to September poses the highest flood risk in the country.\textsuperscript{14}

1.19. The impacts of floods on lives and livelihoods are enormous - affecting over 3.8 million people, 200,000 ha of crop lands, resulting in losses of over 3,100 lives and NPR 6 billion in the last three decades alone.\textsuperscript{15} Prior to the 2015 earthquake, flooding accounted for 53.2\% of combined economic losses from natural disasters in the period 1990-2014.\textsuperscript{16}

1.20. In 2017, a monsoon trough caused flood damage totalling NPR 60,716.6 (USD 584.7) million, almost 3 percent of Nepal's GDP.\textsuperscript{17} In 2018, monsoon rains again triggered floods and landslides that affected 36 of Nepal's 77 districts. Damage was inflicted to infrastructure, including bridges and roads. Relief materials including tents, mattresses and blankets were distributed to affected communities. As a result of severe flooding in the southern plains, paddy production is estimated to have contracted by 1.5 percent from the record-high output the year before.\textsuperscript{18}

1.21. Landslides and slope failures are among the most common hazards in Nepal, due to its geography (steep, fragile slopes), triggered by natural causes (earthquakes and heavy or intense rainfall) and human influence (unplanned development, cultivation and settlements). Overall, over 4,000 lives and NPR 1 billion have been lost due to landslides in Nepal over the last three decades.\textsuperscript{19}

1.22. Droughts are also very common in districts of hill and mountainous ecological zones of the far and mid-western regions. Droughts over the previous decade alone have resulted in a production loss of 1.7 million tonnes of food grains, affecting over 12 million people.\textsuperscript{20}

1.23. Avalanches, cold waves, windstorms, hailstorms, lightning, epidemics and fires are among other hazards. Fires, especially in settlements, are among the most reported disasters and


\textsuperscript{13} The INFORM model provides a risk profile for every country, which consists of a value between 0-10 for the INFORM Risk Index and all of its underlying dimensions, categories, components and indicators. A lower value (closer to 0) represents a lower risk and a higher value (closer to 10) represents a higher risk. INFORM uses historical information to describe the current level of risk. Inform Results 2019. Available at: http://www.inform-index.org/


\textsuperscript{17} Nepal: Basic country statistics and indicators https://www.preventionweb.net/countries/npl/data/


resulted in the highest losses (NPR 9 billion in the last three decades), while epidemics have led to over 16,000 deaths.\(^{21}\)

1.24. Destructive earthquakes occur in Nepal with return periods of 80 years on average, and have graver consequences for life than the more frequent disasters such as floods, landslides and droughts.\(^{22}\) Nepal is the 11th most earthquake-prone country in the world. The first recorded earthquake of 1255 AD killed one-third of the population of the Kathmandu Valley. Nepal has experienced a major earthquake every few generations. The last great earthquake (of magnitude 8.4) in 1934 AD resulted in more than 10,000 deaths in the Kathmandu Valley. Infrastructure and major heritage sites had to be rebuilt. There have since been earthquakes causing severe human and physical loss in 1980, 1988 and 2011.\(^{23}\)

1.25. Nepal is located in a very high seismic risk area; a large part of the country is within the Himalayan mountain range, where seismicity predominantly is due to collision of the Indian and Eurasian continental plates. The impacts from earthquakes are magnified several-fold due to the high physical vulnerability of traditional (stone and mud) or inadequately designed masonry or reinforced cement concrete framed structures, remoteness, rugged terrain, and other societal vulnerabilities that place Nepal in 37th position out of 172 countries.\(^{24}\)

Impact of the 2015 earthquakes

1.26. On Saturday, 25 April 2015 at 11:56 local time, a 7.6 magnitude earthquake as recorded by Nepal’s National Seismological Centre struck Barpak in the district of Gorkha, about 76 km northwest of Kathmandu. The earthquake was followed by more than 300 aftershocks greater than magnitude 4.0 (as of 7 June 2015). Four aftershocks were greater than magnitude 6.0, including one measuring 6.8 which struck 17 days after the first big one with the epicentre near Mount Everest.

1.27. Thirty-one of the country’s 75 districts were directly affected, out of which 14 were declared ‘crisis-hit’ for the purpose of prioritizing rescue and relief operations; another 17 neighbouring districts were partially affected.\(^{25}\) The reported losses as of 9 June 2015 were 8,781 dead; 22,303 injured; 6,266 public buildings damaged; 798,897 private houses damaged and several cultural heritage buildings destroyed. The 12 May aftershock caused additional casualties of more than 200 dead and 2,500 injured. Estimates suggest that eight million people were affected by the earthquakes.

1.28. The ground motion of a strong earthquake causes direct damage or collapse of buildings, and can also trigger geological and/or geotechnical failure or other phenomena causing secondary disasters, such as fire, landslide, soil liquefaction and avalanches. Avalanches and landslides were identified by satellite imagery and field survey, and caused fatalities and damages to roads, constraining the relief activities.

1.29. The Post Disaster Needs Assessment undertaken by the National Planning Commission estimated disaster effects at NPR 706 billion (equivalent to US$ 7 billion) or 33% of GDP. Of that


amount, NPR 517 billion (or 76 percent of the total effects) represents the value of destroyed physical assets, and NPR 189 billion (24 percent of the total effects) reflects the losses and higher costs of production of goods and services arising from the disaster.26

1.30. The share of estimated total disaster effects among the main sectors of social and economic activity (see Figure 1: Damages by sector) reveals that the most affected are social sectors (58 percent of the total effects), which includes housing. This is followed by productive sectors (25 percent), infrastructure (10 percent) and cross-cutting issues (7 percent). Table gives a more detailed breakdown of impacts.

**Figure 1: Damages by sector**

![Pie chart showing damages by sector]

Source: Post Disaster Needs Assessment27


Table 2: Breakdown of estimated earthquake losses by sector

<table>
<thead>
<tr>
<th>Sector</th>
<th>Damages (NPR million)</th>
<th>Losses (NPR million)</th>
<th>Total (NPR million)</th>
<th>Private (NPR million)</th>
<th>Public (NPR million)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Social sectors</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Housing and human Settlements</td>
<td>303,632</td>
<td>46,908</td>
<td>350,540</td>
<td>350,540</td>
<td>-</td>
</tr>
<tr>
<td>Health</td>
<td>6,422</td>
<td>1,122</td>
<td>7,544</td>
<td>1,394</td>
<td>6,150</td>
</tr>
<tr>
<td>Education</td>
<td>28,064</td>
<td>3,254</td>
<td>31,318</td>
<td>2,365</td>
<td>28,953</td>
</tr>
<tr>
<td>Cultural heritage</td>
<td>16,910</td>
<td>2,313</td>
<td>19,223</td>
<td>8,948</td>
<td>10,274</td>
</tr>
<tr>
<td><strong>Productive sectors</strong></td>
<td>58,074</td>
<td>120,046</td>
<td>178,121</td>
<td>158,079</td>
<td>20,043</td>
</tr>
<tr>
<td>Agriculture</td>
<td>16,405</td>
<td>11,962</td>
<td>28,366</td>
<td>25,813</td>
<td>2,553</td>
</tr>
<tr>
<td>Irrigation</td>
<td>383</td>
<td>-</td>
<td>383</td>
<td>-</td>
<td>383</td>
</tr>
<tr>
<td>Commerce</td>
<td>9,015</td>
<td>7,938</td>
<td>16,953</td>
<td>16,953</td>
<td>-</td>
</tr>
<tr>
<td>Industry</td>
<td>8,394</td>
<td>10,877</td>
<td>19,271</td>
<td>19,271</td>
<td>3,654</td>
</tr>
<tr>
<td>Tourism</td>
<td>18,863</td>
<td>62,379</td>
<td>81,242</td>
<td>75,105</td>
<td>6,200</td>
</tr>
<tr>
<td>Finance</td>
<td>5,015</td>
<td>26,890</td>
<td>31,905</td>
<td>20,937</td>
<td>10,969</td>
</tr>
<tr>
<td><strong>Infrastructure sectors</strong></td>
<td>52,460</td>
<td>14,323</td>
<td>66,783</td>
<td>17,281</td>
<td>49,502</td>
</tr>
<tr>
<td>Electricity</td>
<td>17,807</td>
<td>3,435</td>
<td>21,242</td>
<td>15,569</td>
<td>5,673</td>
</tr>
<tr>
<td>Communications</td>
<td>3,610</td>
<td>5,085</td>
<td>8,695</td>
<td>1,712</td>
<td>6,983</td>
</tr>
<tr>
<td>Community Infrastructure</td>
<td>3,349</td>
<td>-</td>
<td>3,349</td>
<td>-</td>
<td>3,349</td>
</tr>
<tr>
<td>Transport</td>
<td>17,188</td>
<td>4,930</td>
<td>22,118</td>
<td>-</td>
<td>22,118</td>
</tr>
<tr>
<td>Water and Sanitation</td>
<td>10,506</td>
<td>873</td>
<td>11,379</td>
<td>-</td>
<td>11,379</td>
</tr>
<tr>
<td><strong>Cross-Cutting issues</strong></td>
<td>51,872</td>
<td>1,061</td>
<td>52,933</td>
<td>1,755</td>
<td>51,178</td>
</tr>
<tr>
<td>Governance</td>
<td>18,757</td>
<td>-</td>
<td>18,757</td>
<td>-</td>
<td>18,757</td>
</tr>
<tr>
<td>Environment and forestry</td>
<td>32,960</td>
<td>1,061</td>
<td>34,021</td>
<td>1,755</td>
<td>32,267</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>517,434</td>
<td>189,027</td>
<td>706,461</td>
<td>540,362</td>
<td>166,100</td>
</tr>
<tr>
<td><strong>Total (US$ million)</strong></td>
<td>$5,174</td>
<td>$1,890</td>
<td>$7,065</td>
<td>$5,404</td>
<td>$1,661</td>
</tr>
</tbody>
</table>

Source: Post Disaster Needs Assessment

1.31. The most affected sector, housing and settlements, sustained about 50 percent of the destruction and production decline caused by the disaster, followed by tourism at 11 percent. The environment, education, finance and agriculture sectors represent between 4-5 percent each of the total disaster effects.

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1.32. The Government of Nepal declared a state of emergency within two hours of the 25 April earthquake striking. A disaster cluster mechanism was immediately activated and an official request for international assistance made. The impressive speed of response in establishing a coordination mechanism, launching the operation and setting up field hubs was attributed to the existing investment in preparedness by the Government of Nepal and its partners.

1.33. The challenge in managing disaster response in an earthquake situation is clearly spelt out in a joint 2017 WHO/IFRC study:

"Earthquakes are considered the most challenging type of "Sudden Onset Disasters". The difficulty of providing meaningful advance warnings means that in a matter of minutes an earthquake can cause extensive death and injury while crippling or destroying lifelines and critical care facilities, particularly the health infrastructure. Whatever the size, level of development and preparedness of the affected state, largescale seismic events are likely to surprise the affected communities, the national authorities and the international community."

1.34. A report from the UN Logistics cluster identified three key logistics challenges at the onset of the disaster:

- **Coordination**: With a high number of organisations involved in the response (78 organisations were part of the Flash Appeal), coordination of response efforts was identified as key to minimize duplication of set-ups and optimise the humanitarian response.
• **Congestion in the Tribhuvan International Airport (TIA):** The TIA airport in Kathmandu is the only international airport in Nepal. It has one airstrip and flight size was limited to 190 metric tonnes during the emergency. Congestion in the airport would delay the delivery of relief supplies to the affected population.

• **Access:** A large part of the affected population was located in mountainous and/or remote areas, some of which were difficult to reach even prior to the earthquakes. With damages to roads and infrastructure and an increased risk of landslides after the earthquake, access was a major challenge to the response. In May 230,000 were estimated to live in areas inaccessible by road, thereby requiring air or porter/pack animal transport.34

1.35. Difficulties were experienced in the initial days after the earthquake with the airport in Kathmandu struggling to cope with the volume of assistance arriving, and the need to balance commercial and humanitarian traffic.35 One issue that the national authorities faced was that the National Calamity Relief Act did not envisage the operational and physical presence of foreign organisations to help with relief operations.36 This has been subsequently addressed in the Economic Act of Government of Nepal that incorporates provisions to address these issues. Other relevant legislation includes: the National Disaster Risk Minimize and Management Act 2018, the National Disaster Risk Minimize Policy 2019 and the National Disaster Risk Minimize Strategy 2018-2030. The National Disaster Risk Minimize Council is the institution responsible for the management disaster response.

### Box 2: Disaster Response Teams and the 2015 earthquake in Nepal

Disaster Response Teams (DRT) arrived within 48 hours after the earthquake to manage incoming international aid. On site, they faced a chaotic scene as emergency goods flooded in and piled up because of an acute shortage of adequate equipment to handle cargo. Nepal's only international airport was quickly overwhelmed due to the slow pace of offloading relief goods from the planes and insufficient storage space. Moreover, a landing weight limit of 196 tons was quickly imposed on Tribhuvan Kathmandu International airport's single runway to reduce the risk of damage to the runway surface. Tribhuvan’s apron—where aircrafts are parked, unloaded and refuelled—could only accommodate nine planes at once. With scheduled passenger services given priority, and high demand for slots from military and civilian aircraft, the airport risked almost certain congestion. Fortunately, an area about two kilometres from the apron was earmarked as a possible “Humanitarian Staging Area” (HSA) by UN Logistics Cluster.

With all these factors, DRTs would need to tap into its wide range of expertise in airport logistics, warehouse and supply chain management in order to help put a system in place. They needed to get cargo planes offloaded quickly, then the air pallets to the HSA for eventual reloading onto trucks so that the relief aid could then be redistributed to the people in need. For any of this to be possible, they had to establish trust with all the local authorities and all other actors involved in relief efforts. On the strength of the meeting they had with all organizations on site, the DRT team was given full access to the airport.

The airport lacked proper equipment and manpower to cope with the sudden deluge of relief goods from the international aid community. The team reacted by engaging its local contacts and developing efficient and innovative ways to move the goods. Coordination between the DRTs, UN, airport authorities, NGO's and the U.S military made a tremendous difference to the success of the relief effort.

Weather-related challenges were experienced with volunteers having to work on the tarmac for 12 hours daily, under 28-30 degree Celsius. Important to note is that after the 7.8 magnitude earthquake on 25 April 2015, another major 7.3 earthquake hit on 12 May 2015. The DRTs

continued to work despite the second earthquake and ongoing aftershock tremors.

Source: UNOCHA and DHL

1.36. The Customs Act of 2007 and the Customs Regulation of 2007 are the legal foundation regulating imports/exports, and they are administered by the Department of Customs which is under the Ministry of Finance. Nepalese customs service had applied provisions of the Model Customs Agreement for the Facilitation and Regulation of International Disaster Relief and Initial Recovery Assistance. The agreement with the UN is on “measures to expedite the import, export and transit of relief consignments and relief personnel in the event of disasters and emergencies”. It foresees that for the UN and other organisations working under its auspices, relief consignments, including tents, prefabricated houses and “other goods of prime necessity” may be imported tax-free without usual restrictions on quantities and value, and with fast track import procedures.

1.37. Other international organisations, such as the International Federation of the Red Cross and Red Crescent Societies (IFRC), have also concluded their own Legal Status Agreements with the government which permit tax and duty-free import of relief supplies. This included simplification of immigration processes for aid workers, including those arriving without visas. Coordination between donors, humanitarian agencies and the government was working much better.

1.38. A report by the IFRC Disaster Law Programme highlighted that a significant proportion of the responsibility for customs delays resided with those sending relief consignments. Inexperienced actors often omitted required customs documentation; marked consignments incorrectly or in languages not locally understood; or failed to designate or alert named consignees. On the latter point, NGOs in Nepal noted that “In some instances, particular organisations were listed as consignees for unsolicited goods or equipment and were therefore required to pay customs fees and taxes, which they were not able to afford.” Such issues added to congestion.

1.39. In response to the clearance and coordination issues, the government brought representatives together of agencies responsible for clearance to streamline processes. Initial difficulties in clearing humanitarian aid (notably in making use of the single window system) had been resolved and clearance was taking place in 15 to 20 minutes. Other obstacles were also encountered in distribution of relief items due to disruption of the transport system and bad weather.

1.40. A further issue cited by the IFRC concerned the critical role of telecommunications and information technology equipment in ensuring the effectiveness of disaster response operations. The IFRC report observed that whilst satellite phone technology would have been extremely useful for communicating in times of disaster, it was very costly and had not been granted any tax, licensing or import exemptions, which placed it out of reach of most relief providers.


40 Naindra Prasad Upadhaya, Permanent Secretary, Department of Commerce and Supply Management, Nepal, Statement at Fifth Global Review of Aid for Trade, 30 June-2 July 2015 p.104 Available at: https://www.wto.org/english/tratop_e/devel_e/att_e/global_review15proq_e/5gr_review_e.pdf

1.41. The WTO Secretariat Report prepared for the 2018 Trade Policy Review highlights that Nepal requires import licences or permits for several products that were included in the disaster relief effort, including specific communications equipment (such as wirelesses, walkie-talkies, transmission receivers, link radio equipment, etc).

1.42. Commercial imports continued alongside relief supplies. Speed and efficiency of border clearance procedures were critical in ensuring the continued functioning of domestic markets. Nepal has undertaken various institutional reforms to promote trade-facilitation. The Government through Department of Customs has been introducing Customs Reform and Modernization Strategies and Action Plan (CRMSAP) since 2003. Implementation of the 5th CRMSAP started in 2017 and continues until 2021. The 5th CRMSAP envisions essential reform strategies, including, expedited legitimate trade facilitation, enhanced customs automation & data management, streamlined coordinated border management, organizational restructuring to support risk-based clearance, among others.42

1.43. An e-Customs master plan is being implemented. Web-based ASYCUDA world system has been implemented in 15 customs offices, covering about 98% of total trade. Implementation of the system in the remaining five customs offices is in the process. The development of Nepal National Single Window (NNSW) is in progress and is expected to be completed in 2019. Risk-based selectivity module (green, yellow and red channel) has been implemented. Moreover, a national Trade Facilitation Committee has been established. Following Nepal’s ratification of the TFA on 24 January 2017, Nepal acceded to the Revised Kyoto Convention in February 2017.43

1.44. Significant developments have taken place in the areas of trade facilitation. Nepal has signed trade and transit agreements with its neighbouring countries. Nepal ratified the WTO Agreement on Trade Facilitation, and deposited its instrument of acceptance on 24 January 2017. It also notified its category A, B, and C commitments under the TFA to the WTO. According to these, two measures are under Category A (or 2% of commitments) as implemented, eight measures under Category B are to be implemented by December 2020 without capacity-building support, and 26 measures (or 85% of commitments) under Category C are to be implemented upon receipt of capacity-building support. No indicative or definitive implementation dates have been indicated for category B or C measures.

Figure 3: Nepal’s commitments under the Trade Facilitation Agreement

Source: WTO Secretariat44

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44 Trade Facilitation Agreement Database, WTO. Available at: https://www.tfadatabase.org/members/nepal/measure-breakdown
1.45. A further issue highlighted by the IFRC concerned recognition of professional qualifications. No special provisions are made for doctors or medical professionals who are seeking to enter the country on short notice to provide medical services in disasters and emergencies. Relief providers also face risk of expulsion or other types of civil or criminal liability. For example, one international medical NGO was reportedly expelled from Nepal for failing to comply with medical registration requirements. A joint 2017 WHO/IFRC study noted that on 29 April 2015, the Emergency Medical Team (EMTs) coordination had communicated a clear message that no further teams were required as trauma cases had decreased and there were no gaps that foreign emergency teams were needed to fill. The Ministry of Health leader for international response co-ordination, with the agreement of the Minister for Health requested that all EMTs en route without firm tasking location, and all that were on standby, should stand down.

**Issues arising in recovery**

1.46. The Post-Disaster Needs Assessment estimated that economic growth would decline by more than 1.5 percentage points from projected full year GDP growth of 4.6 per cent. Actual economic performance was more severely impacted than predicted. A fall of more than 4 percentage points in GDP growth was registered, with GDP growth of 0.4% recorded. The disruption of supplies that began in September 2015 on Nepal's southern border further added to the negative impact of the earthquakes on the economy (see Box 3).

### Box 3: Disruption of essential supplies

A second shock followed in September 2015 in the form of a near-complete disruption in cross-border trade with India. Acute shortages of fuel, raw materials, and essential supplies across the country caused prices to soar and industry and businesses to curtail economic activity. As a result, Nepal experienced its lowest growth in the last 14 years, barely avoiding a recession. While the effects of the trade disruptions may be temporary, they obstructed earthquake reconstruction efforts, dampened economic momentum and delayed a post-earthquake reconstruction recovery.47

On 20 November 2015, the UN Secretary-General underlined his growing concern over the blocking of essential supplies on the Nepal-India border. He noted alarm at reports of the obstruction, and destruction, of life-saving medical supplies and the continued impact on humanitarian operations. He called on all sides to lift the restrictions without further delay and underlined Nepal’s right of free transit.48

Source: World Bank and United Nations

1.47. Figure 4 Imports have grown from US$5,916 million in 2011 to US$10,038 million in 2017. Goods imports continue robust double-digit growth averaging US$833 million per month in the first half of FY2018 – well-above the five-year average of US$557 million.

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1.48. Growth has been driven by both oil and non-oil imports. Among non-oil imports, consumer goods and household food items have remained fairly flat most likely due to a slowdown in growth of remittances. Both industrial and capital goods imports, however, have remained strong driven by materials needed for reconstruction and infrastructure projects. The largest category of imports were machinery and transport equipment with 24.7% share in 2017 (18.4% in 2011). Projections for 2018FY suggest that the trade normalisation along the southern border of the country is expected to contribute to further increase in import of construction materials like cement, wires, rods, coils, bars, other machinery and parts.

1.49. Another effect of the earthquakes has been to turn Nepal's current account surplus into a deficit in FY 2016-17 due primarily to increasing imports of goods and services while remittances declined as a percentage of GDP (see Table 1 below).

### Table 1: Selected economic indicators, 2012-13-2017/18

<table>
<thead>
<tr>
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<tbody>
<tr>
<td><strong>Real sector</strong></td>
<td></td>
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<tr>
<td>GDP</td>
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<td></td>
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</tr>
<tr>
<td>GDP per capita (US$)</td>
<td>708</td>
<td>725</td>
<td>766</td>
<td>748</td>
<td>866</td>
<td>1,004</td>
</tr>
<tr>
<td>Real GDP growth (% change)</td>
<td>4.1</td>
<td>5.99</td>
<td>3.3</td>
<td>0.59</td>
<td>7.91</td>
<td>6.29</td>
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<tr>
<td>Consumption expenditure (% GDP)</td>
<td>89.4</td>
<td>88.1</td>
<td>90.8</td>
<td>95.9</td>
<td>88.1</td>
<td>85.0</td>
</tr>
<tr>
<td>Gross national savings (% GDP)</td>
<td>40.7</td>
<td>45.7</td>
<td>44.1</td>
<td>40.1</td>
<td>45.4</td>
<td>43.9</td>
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<tr>
<td>Gross fixed capital formation (% GDP)</td>
<td>22.6</td>
<td>23.5</td>
<td>28.0</td>
<td>28.7</td>
<td>31.8</td>
<td>34.1</td>
</tr>
<tr>
<td>Exports of goods and services (% GDP)</td>
<td>10.7</td>
<td>11.5</td>
<td>11.6</td>
<td>9.5</td>
<td>9.1</td>
<td>8.8</td>
</tr>
<tr>
<td>Imports of goods and services (% GDP)</td>
<td>37.5</td>
<td>40.8</td>
<td>41.5</td>
<td>39.3</td>
<td>42.9</td>
<td>45.5</td>
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<tr>
<td>Inflation (CPI average, % change)</td>
<td>9.9</td>
<td>9.1</td>
<td>7.2</td>
<td>9.9</td>
<td>4.5</td>
<td>4.2</td>
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<td><strong>Government finance</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total revenue (NPR billion)</td>
<td>296.8</td>
<td>363.6</td>
<td>405.9</td>
<td>482.1</td>
<td>609.2</td>
<td>732.20</td>
</tr>
<tr>
<td>Total expenditure (NPR billion)</td>
<td>358.6</td>
<td>435.1</td>
<td>531.3</td>
<td>601.0</td>
<td>837.2</td>
<td>1,046.51</td>
</tr>
<tr>
<td>Public debt (% of GDP)</td>
<td>31.9</td>
<td>27.9</td>
<td>25.4</td>
<td>27.6</td>
<td>26.4</td>
<td>30.3</td>
</tr>
<tr>
<td>Foreign (% of GDP)</td>
<td>19.7</td>
<td>17.7</td>
<td>16.1</td>
<td>17.2</td>
<td>15.6</td>
<td>17.3</td>
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<tr>
<td><strong>External sector</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NPR/US$ (period average)</td>
<td>88.0</td>
<td>98.3</td>
<td>99.5</td>
<td>106.4</td>
<td>106.2</td>
<td>104.4</td>
</tr>
<tr>
<td>Remittances (% GDP)</td>
<td>25.6</td>
<td>27.7</td>
<td>29.0</td>
<td>29.6</td>
<td>26.3</td>
<td>25.1</td>
</tr>
<tr>
<td>Current account (%GDP)</td>
<td>3.4</td>
<td>4.6</td>
<td>5.1</td>
<td>6.2</td>
<td>-0.4</td>
<td>-6.6</td>
</tr>
</tbody>
</table>

* Not available.

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1.50. One factor mitigating the current account deficit is development finance. Aid accounted for just over 5% of gross national income in 2017 according to World Bank figures. An international donors conference, "Toward a Resilient Nepal" was held in Kathmandu on June 25, 2015, to organize support for Nepal based on the needs identified in the Post Disaster Needs Assessment. At the conference, approximately US$4.4 billion was pledged in support of Nepal’s recovery and reconstruction efforts.51

1.51. Figure 5 highlights trends in official development assistance as reported to the Organisation for Economic Cooperation and Development’s Creditor Reporting System. Disbursements of humanitarian relief totalled US$215.1 million in 2015, a figure that was in addition to regular programme aid disbursed (US$397.9 million) by donors reporting to the CRS in 2015. Support was channelled through various delivery mechanisms: central and local government, the World Food Programme, eight UN agencies, bilateral aid programmes, local and international non-governmental organizations. The OECD data records a total of 329 ODA grants provided in humanitarian relief, with an average project size of US$0.7 million.

**Figure 5: Official Development Assistance Flows to Nepal from OECD Development Assistance Committee reporters**

Source: OECD Creditor Reporting System and World Bank

1.52. Figure 6 below highlights savings were also used by households and businesses to mobilize financial resources to fund recovery. The effect is most noticeable in 2016, when gross domestic savings as a percentage of GDP fell by 11.9% to 3.8%.

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The most affected sector by the 2015 earthquakes, housing and settlements, sustained about 50 percent of the destruction. A total of 498,852 houses either fully collapsed or were damaged beyond repair, and 256,697 were partly damaged. The catastrophic impact of the earthquake on the built environment of Nepal was primarily the result of the significant seismic vulnerability of unreinforced masonry buildings. Prior to the earthquake, the PDNA found that there was a general lack of awareness of seismic risk in communities, coupled with lack of dissemination of improved construction practices (particularly rural areas), and a slow mechanism for enforcement of relevant building codes.52

To address the aftermath of the earthquake in 2015, the Government formed the National Reconstruction Authority (NRA) to manage the earthquake recovery and reconstruction in Nepal. The NRA’s objectives are set in the National Reconstruction Policy and focus on among others building resilience for communities at risk in the earthquake-affected districts, improving the resilience of the settlements and resettling the affected communities to appropriate sites.53

To address housing reconstruction, the Government of Nepal launched a housing reconstruction program. The program serves as a coordinating framework to standardize housing reconstruction policy, irrespective of the funding sources. It aims to rebuild using earthquake-safer building techniques through grants and technical assistance. In conjunction with training, homeowners receive a subsidy for housing reconstruction in three tranches, upon proper completion of various stages of construction, as certified by a government engineer. The staged subsidy is meant to incentivize owner-driven reconstruction adherence to seismic safety standards.54

Of the 667,662 beneficiaries eligible for housing grants, over 85 percent have been enrolled and received the first tranche in February 2018. More than 40 percent of the houses are under construction as beneficiaries start receiving grants, and disbursement of the second tranche has also picked up, but third-tranche disbursements are still low.55

Reconstruction of the housing stock led to a sharp increase in the import of construction materials (see

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54 Post-Earthquake Housing Reconstruction Support, 9 August 2017, USAID website Available at: https://www.usaid.gov/nepal/fact-sheets/post-earthquake-housing-reconstruction-support
Table 2). Due to the limited availability and/or quality of local and manufactured materials in Nepal, a significant proportion of building materials are imported, mainly from India and China. This includes an estimated 80 percent of all cement, as well as glass, aluminium, plaster of paris, fixtures and fittings.56

Table 2: Import values and growth of construction materials

<table>
<thead>
<tr>
<th>Year</th>
<th>Cement (in Million Rupees)</th>
<th>Wire rod</th>
<th>Wire product</th>
<th>Enamel &amp; other paints</th>
<th>Cement growth rates (%)</th>
<th>Wire rod growth rates (%)</th>
<th>Wire product growth rates (%)</th>
<th>Enamel &amp; paint growth rates (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>9718.3</td>
<td>6480.3</td>
<td>1165.2</td>
<td>1869.8</td>
<td>3.1</td>
<td>58.4</td>
<td>35.2</td>
<td>40.4</td>
</tr>
<tr>
<td>2014</td>
<td>10125.5</td>
<td>5433.1</td>
<td>1289.5</td>
<td>1901.7</td>
<td>4.2</td>
<td>-16.2</td>
<td>10.7</td>
<td>1.7</td>
</tr>
<tr>
<td>2015</td>
<td>11689.5</td>
<td>7940.8</td>
<td>1394.7</td>
<td>2027.7</td>
<td>15.4</td>
<td>46.2</td>
<td>8.2</td>
<td>6.6</td>
</tr>
<tr>
<td>2016</td>
<td>24032.5</td>
<td>92612</td>
<td>2015.8</td>
<td>2328.4</td>
<td>105.6</td>
<td>1066.3</td>
<td>44.5</td>
<td>14.8</td>
</tr>
</tbody>
</table>

Source: Computation based on data from Nepal Rastra Bank

1.58. The import of cement jumped by more 137% from NPR 10.1 billion in 2014 to NPR 24 billion in 2016. Similarly, there were significant increases in both the value and growth of the import of enamel and paints, wire rod and wire products.

1.59. A 2014 study by Nepal Red Cross Society and the International Federation of Red Cross and Red Crescent Societies on the housing stock indicated a number of challenges, both practical and legal, that needed to be addressed on shelter and accommodation, including:

- Limited availability of some materials in Nepal, partly due to environmental protection regulations which prohibit the use of materials from protected areas;
- Lack of compliance with national standards by local manufacturers, and inadequate enforcement mechanisms, making it difficult to procure adequate quality materials on the local market;
- Priority given to cost rather quality under the Public Procurement Act and difficulties with the anti-competitive behaviour of suppliers;
- Lack of compliance with emergency shelter material standards by Shelter Cluster partners; and
- Limitations on international procurement under the Public Procurement Act in cases where goods are available on the local market.57

1.60. With regard to preference for local suppliers under the Public Procurement Act, 2007 (as amended), and the Public Procurement Regulations, 2007, the TPR highlights that although discrimination is prohibited, goods manufactured in Nepal should be acquired if the difference in price compared to foreign goods is not more than 10%, and for consultancy services, international consultants must have a local agent.

56 Regulatory barriers to providing emergency and transitional shelter after disasters, Country case study: Nepal*, Nepal Red Cross Society and the International Federation of Red Cross and Red Crescent Societies, Geneva, 2014 Available at: https://www.ifrc.org/Global/Publications/IDRL/country%20studies/Nepal%20Shelter%20Full%20Report%20FINAL.pdf
57 Regulatory barriers to providing emergency and transitional shelter after disasters, Country case study: Nepal*, Nepal Red Cross Society and the International Federation of Red Cross and Red Crescent Societies, Geneva, 2014 Available at: https://www.ifrc.org/Global/Publications/IDRL/country%20studies/Nepal%20Shelter%20Full%20Report%20FINAL.pdf
1.61. Insurance coverage for damaged housing stock is almost non-existent in Nepal. Nepal’s insurance market remains very small, and has a limited range of products. In mid-July 2016, the ratio of total assets/liabilities to GDP was 7% for insurance companies and 0.3% for re-insurance companies. Liabilities end up with the government as a final guarantor.

1.62. While the insurance sector as a whole is thinly capitalized, the number of claims made in response to the earthquake was low given the scale of the disaster (estimated by the Insurance Association at 15 thousand potential claims representing a maximum of NPR 16 billion of covered losses). The impact of losses was also mitigated by the fact that around 80 percent of their liability are covered under re-insurance treaties. The Insurance Association estimated that its total losses (i.e. net of reinsurance provided by foreign reinsurers) from the earthquake would not be more than NPR 2 billion.

1.63. Insurance coverage is compulsory for third-party liability insurance on motor vehicles and migrant workers who are required to have an insurance policy covering any kind of accident, disability or death. Section 38 of the Labour Act of 1992 (as amended) establishes mandatory insurance for certain occupations, which is provided via a personal accident policy. The PDNA suggests tying rebuilding to expansion of property insurance coverage and recommended some form of direct government assistance given the lack of insurance cover, scarcity of savings, and higher poverty levels.

1.64. The 2015 earthquakes disaster created a short-term labour shortage in the manufacturing sector. A large number of migrant workers (both Indian and Nepalese) absented themselves from their workplace either out of fear or to help their families. Damage to premises, stocks and machinery, together with a lack of labour disrupted the manufacturing sector’s operations. Roads, bridges and customs points were severely affected, which had significant implications for both merchandise and services trade. An increase in wage rates in the construction sector (the daily rate of workers doubled from NPR 500 before the quake to NPR 1000 in June 2015) also squeezed the manufacturing sector.

1.65. Short term labour shortages are indicative of the broader structural labour market issues created by large-scale labour migration. Out of a total workforce of 14 million, some 4 million Nepalese (28 percent) are believed to be working abroad. Since the end of the conflict in 2007, the labour force has increased, on average, by about 330,000 new entrants each year. Registered outward migration exceeded the increase in labour force each year, averaging 375,000 during this period. This is leading to a sharp reduction of labour supply inside Nepal.

1.66. The 2015 earthquakes appear to have dampened the outflow of migrant workers, which reached a five-year low in FY2017. During the first half of FY2018, an average of 30,000 Nepalese workers per month departed for employment opportunities abroad. This is the lowest monthly average outflow of migrant workers since FY2011, when the global economy was still recovering from the impact of the 2007–08 global financial crisis. Workers leaving for Qatar, Malaysia, Saudi Arabia, and the United Arab Emirates – the four main destinations - continued to remain soft. A factor cited by the World Bank was reduction in public spending in destination countries due to low crude oil prices on international markets. Another factor may have also

60 The 1950 Peace and Friendship Treaty between India and Nepal provides for the free movement of people between the two countries.
have been rising wage rates in the Nepalese building construction sector driven by reconstruction financing.

Figure 7: Migration and remittance flows 2008-2016

Source: World Bank

1.67. Slowing remittances are being outpaced by the growing trade deficit, and have resulted in a current account deficit. While the volume of remittances continued to average over US$550 million per month in FY2018, its growth has been slowing. In contrast, the trade deficit continues to surge. With remittances no longer able to finance the trade deficit as in the past, the current account deficit has increased significantly to US$737 million in the first six months of FY2018, up from US$9 million compared to the same period in FY2017.

1.68. Merchandise exports decreased from US$907.6 million in 2011 to US$740.7 million in 2017, mainly due to the effects of the earthquakes and trade disruptions, while the appreciation of the real exchange rate also affected the competitiveness of Nepalese exports. The merchandise goods export structure remains heavily concentrated in textiles, clothing, and agricultural products which, together, accounted for 74.6% of total exports in 2017, against 64.6% in 2011.

1.69. In the view of the Government, the trade deficit poses a challenge to Nepal's development (see Table 3). The share of exports in total trade decreased from 28.3% in FY2004/05 to 6.9% in FY2016/17. The share of imports has increased from 71.7% in FY2004/05 to 93.1% in FY2016/17. The export-import ratio has deteriorated from 1:2.5 in FY2004/05 to 1:13.5 in FY2016/17. Nepal's trade deficit has grown by more than ten-fold.

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65 Labour migration for employment: a status report for Nepal: 2014/201 (http://www.worldbank.org/en/topic/labormarkets/brief/migration-and-remittances) Note: Migration figures exclude the Nepali migrant workers who migrated to the Republic of Korea for foreign employment through the government-to-government Employment Permit System. From 2008 to 2012, both inflows and outflows of remittance increased by 76% ($2727 million to $4792 million) and 900% ($5 million to $450 million) respectively. In relative terms, outflows grew at a higher rate than inflows. From 2012 to 2015, inflows increased but decreased marginally between 2015 a


1.70. Merchandise exports are highly concentrated geographically. However, the share of India, Nepal's single most important export market destination, decreased from 67.7% in 2011 to 56.7% in 2017, caused by lower growth in India. China and the United States also increased their share in Nepal's total merchandise exports.

1.71. Nepal is a beneficiary under the GSP schemes of Australia, Canada, the European Union, the Eurasian Economic Union, Iceland, Japan, Kazakhstan, New Zealand, Norway Switzerland, Turkey, and the United States. Nepal does not participate in the Global System of Trade Preferences (GSTP) amongst developing countries. Box 4 outlines the additional trade preferences offered by the United State to Nepal in response to the earthquake.

### Box 4: Trade Preferences Granted by the United State of America to Nepal

The trade preferences build on an existing framework of US programs intended to assist Nepal's economic development, including a Trade and Investment Framework Agreement that entered into force in April 2011. Nepal also benefitted from the US generalized system of preferences scheme which allowed many products to enter the United States duty-free.

In response to the impact of the 2015 earthquakes, the United States considered that an emergency response was required and that Nepal needed substantial additional support to pursue its social and economic recovery, including in the form of increased market access for its exports.

As such, the United States applied for WTO waiver to implement a unilateral, time limited trade liberalization program targeted at stimulating Nepal's exports and attracting more foreign direct investment. The waiver was granted in July 2016 and covers additional duty-free treatment for 77 products originating. Of the total number of tariff lines receiving preferences, 56 are "textiles"; 10 are "leather, footwear, etc."; 9 are "clothing"; and the remaining 2 are "other manufacturing products". This unilateral preferential agreement entered into force on 30 December 2016 and will end on 31 December 2025.

Another element of the trade preferences was establishment of a trade facilitation and capacity building program for Nepal so as to:

- Enhance the central export promotion agency to support successful exporters and to build awareness among potential exporters about opportunities abroad and ways to manage trade documentation and regulations in the United States and other countries;
- Provide export finance training for financial institutions;
- Assist the Government of Nepal in maintaining publication on the Internet of all trade regulations, forms for exporters and importers, tax and tariff rates, and other

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documentation relating to exporting goods and developing a robust public-private dialogue, through its National Trade Facilitation Committee; and

- Increase access to guides for importers and exporters, through publication of such guides on the Internet, including rules and documentation for United States tariff preference programs. 69

Source: World Trade Organization

1.72. During the PDNA consultation process, stakeholders from the Commerce, Industry and Supplies sector recommended the following policy measures, some of which could be integrated into the sector strategy following discussion and validation by Government and other stakeholders:

- Increased government budget to the sector for recovery and revival, in order to cover direct losses and to channel additional practical assistance to MSMEs, in particular in high-priority sectors such as construction and for target groups with specific needs, such as returning migrant workers, youth and women;

- Development of an overall industrial vision addressing import-substitution and export growth;

- Downward adjustment of interest rates to avoid depression and of cash reserve ratio rates for ensuring sufficient liquidity;

- Temporary relaxation of rules regarding provisioning by the Central Bank to allow for rescheduling of loans;

- Reductions in corporate tax and VAT;

- Subsidies and reductions in customs duties on materials that are key for reconstruction;

- Implementation of the national employment policy to address the lack of availability of skilled labour and weak links between the supply and demand of labour; possible temporary measures (e.g. wage subsidies) for securing labour; and enactment of the revised draft Labour Act for securing harmonious and enabling industrial relations and to stimulate the attraction of workers to the domestic industrial sector; and

- Infrastructure-related measures (e.g. road construction for linkages to neighbouring countries) and trade financing mechanisms to boost trade.70

1.73. Unreliable access to power is consistently identified by firms as the greatest obstacle to their operations, and a contributory factor to Nepal’s poor manufacturing performance over the past decade.71 However, according to the Nepal Electricity Authority, the reliability to of power supply has improved and as of May 2018, it has ended the load-shedding to all consumer categories.72

1.74. Nepal’s most abundant and yet underexploited resource is hydropower. The 2015 earthquakes damaged hydropower plants, transmission system (substation and lines), and distribution lines. The PDNA estimated the cost of physical damage at NPR 17.8 billion and

69 “Trade Preferences Granted by the United States of America to Nepal”, Request for a WTO Waiver, 29 June 2016, G/C/W/724
72 https://nea.org.np/annual_report
operational losses of NPR 3.3 billion for power sales revenues and about NPR 97 million for the Government in royalty payments.73

1.75. Given its natural endowments, it is possible to envision an electricity sector in Nepal that could boost growth, poverty reduction, and shared prosperity for the country.74 The period 2016-26 has been declared National Energy Crisis Reduction and Electricity Development Decade (Energy Emergency Decade). Nepal recognizes that it must accelerate the development of its abundant hydropower potential to reduce poverty and stimulate economic growth. Hydropower development would provide clean energy to enhance economic and social development in rural and urban areas, and enable Nepal to generate revenue from the export of excess energy to neighbouring countries.75

1.76. Tourism is one of the most significant contributors to the national economy in terms of income, employment, foreign exchange and extending market for domestic production of both commodities and services. Nepal offers world class destination due to its outstanding natural beauty, biodiversity, and rich cultural heritage. Majestic mountains (8 out 14 of the world’s highest peaks), socio-cultural diversity, World Heritage sites, religious sites (including Lumbini, Pashupatinath, Janakpur, Mukintinath, etc.), natural heritage (including various national parks and wildlife sanctuaries) and adventure tourism opportunities, form the core of Nepal’s tourist offer.

1.77. The 2015 earthquakes hit the tourism sector badly. Among productive sectors, it sustained 52% of estimated losses, with the PDNA estimating that damage totaled approximately NR 18.8 billion. The majority of the damage was sustained (86%) by hotel accommodations and home stays (9%), with hiking trails also affected. Tourist arrivals saw a year-on-year decline of 31% in 2015 or 251,148 arrivals. In the first three months after the first earthquake struck (May-July 2015), tourist numbers were down by about 90% according to the Post Disaster Needs Assessment.

1.78. The sector has been quick to return to growth after the earthquake. Nepal has seen consistent progress in the last 2 years with impressive growth rates of about 40% and 25% in 2016 and 2017, respectively.76 Table 6 gives data on tourists and tourism.77

<table>
<thead>
<tr>
<th>Year</th>
<th>Total tourists by air</th>
<th>Total tourists by land</th>
<th>Average length of stay (in days)</th>
<th>Per day expenditure (US$)</th>
<th>Receipts from tourists (US$ million)</th>
<th>Number of hotels</th>
<th>Number of beds</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>492,092</td>
<td>598,258</td>
<td>12.1</td>
<td>35.6</td>
<td>379</td>
<td>853</td>
<td>31,657</td>
</tr>
<tr>
<td>2013</td>
<td>579,616</td>
<td>594,848</td>
<td>12.5</td>
<td>42</td>
<td>388.9</td>
<td>1,026</td>
<td>34,523</td>
</tr>
<tr>
<td>2014</td>
<td>790,418</td>
<td>585,981</td>
<td>12.4</td>
<td>48</td>
<td>472.2</td>
<td>1,075</td>
<td>36,179</td>
</tr>
<tr>
<td>2015</td>
<td>538,970</td>
<td>407,412</td>
<td>13.2</td>
<td>70</td>
<td>544.3</td>
<td>1,073</td>
<td>36,950</td>
</tr>
<tr>
<td>2016</td>
<td>753,002</td>
<td>572,563</td>
<td>13.4</td>
<td>53</td>
<td>392.7</td>
<td>1,062</td>
<td>38,242</td>
</tr>
<tr>
<td>2017</td>
<td>940,218</td>
<td>760,577</td>
<td>12.6</td>
<td>54</td>
<td>510</td>
<td>1,101</td>
<td>39,833</td>
</tr>
</tbody>
</table>

Source: Ministry of Culture, Tourism and Civil Aviation/MoF.

Note: The figures do not include Indian tourists who travel to Nepal by land.78

1.79. The National Tourism Strategy, 2016-2025, launched in November 2016, seeks to tap into this potential by mobilizing domestic investment, promoting foreign direct investment in the sector, and implementing strategies such as branding, marketing, infrastructure development and improvement of quality of tourism. Some primary targets include increasing arrivals to 2.5 million, average length of stay to 15 days, average spending per tourist per day to USD 90, jobs in the tourism sector to 898,000, foreign exchange earnings from the sector to NPR 340 billion, and the sector's contribution to Nepal's GDP to 9.3%, by 2025.79

1.80. More than 1700 foreign investment projects have been started in the tourism sector with worth about NPR 137.7 billion in total and have created almost 65,000 direct jobs since 2011. The Government recognises the need to address gaps in tourism-related infrastructure to truly unleash the potential of tourism sector in Nepal.80

1.81. Agriculture contributed 27.4% of Nepal's GDP in 2017/18 and accounts for two-thirds of employment. It is the main contributor to household level food and nutrition security of the rural population. Farmers are mainly smallholders with an average farm size of 0.68 ha and low productivity. Agriculture is largely semi-subsistence. In value terms, crop production is dominant with rice, maize, wheat, potatoes and vegetables as the main products.81 Agriculture in Nepal is characterized by volatility and relatively low yields compared to neighbouring countries. Agricultural productivity growth, though modestly increasing, has been one of the lowest in the region.82

1.82. Nepal's diverse topography favours the production of a wide variety of products but it equally engenders challenges including a high risk of natural disasters. The earthquakes of 2015 and flooding in successive years (2017 and 2018) negatively impacted the sector. Table 5 compares the impact of the 2015 earthquakes and the 2017 flooding. It highlights that the monetary value of estimated damage and losses from the 2017 flooding was 130% higher than that resulting from the earthquake. In practice, the impacts were different. The earthquake damaged agricultural-related infrastructure such as grain stores and stocks, service centres, livestock shelters, milling facilities, dairies agriculture tools, equipment and machineries. The flooding had a more direct on production, with direct losses in crops, livestock and poultry, and some infrastructure such as irrigation systems.

<table>
<thead>
<tr>
<th>Sector</th>
<th>Earthquake effects (NPR million)</th>
<th>Sectoral share of earthquake effects (NPR million)</th>
<th>Flooding effects (NPR million)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Damages</td>
<td>Loss</td>
<td>Total</td>
</tr>
<tr>
<td>Crops, fishes and bees</td>
<td>9,005</td>
<td>9,213</td>
<td>18,218</td>
</tr>
<tr>
<td>Livestock and poultry</td>
<td>7,400</td>
<td>2,718</td>
<td>10,117</td>
</tr>
<tr>
<td>Irrigation</td>
<td>24</td>
<td>31</td>
<td>55</td>
</tr>
<tr>
<td>Total</td>
<td>16,405</td>
<td>11,962</td>
<td>28,366</td>
</tr>
</tbody>
</table>

Source: Statistics based on the 2015 Earthquake post disaster needs assessment and 2017 post flood recovery needs assessment.

1.83. The earthquakes and floods affected the food security of the population. The earthquakes made approximately 3.5 million people vulnerable with immediate food needs, out of whom 1.4

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23

million people were considered highly vulnerable. Female-headed farming households in the 24 districts hit by the earthquake disaster were the most affected.

1.84. The flooding and 2015 earthquakes has stimulated growth in food imports. Imports jumped 29.5% from US$1.39 billion in 2014 to US$1.8 billion in 2017. The government plans to double agricultural production in the next 5 years by modernizing, diversifying, commercializing, and restructuring the sector. Other policies aim at improving efficiency, sustainability, and resilience to climate change and disasters. The largest programme is for irrigation (NPR 95 billion over 10 years), and the total 10-year cost of all programmes is about NPR 502 billion, about 11% of which is to come from donors.

1.85. Total damage and losses in revenue in the telecommunications sector from the 2015 earthquakes were estimated at NPR 3.6 billion (US$36.10 million) and NPR 5 billion (US$50.85 million), respectively. Network congestion and downtime were experienced. Damage was mainly incurred on aerial cables. Fibre optic cables for network backhaul that were ducted and buried were not adversely affected. One issue encountered was a lack of reliable power and insufficient supply of fuel for diesel engine generators which caused network downtime. A large number of subscribers were also out of reach as they were unable to charge their mobile phones, or use their computers due to a lack of power. Operators faced operational losses due to downtime. Some also voluntarily incurred revenue loss through the provision of free services to customers.

1.86. The 2015 earthquakes demonstrated very clearly the critical role of the communications sector. Post-disaster in Nepal relief efforts relied heavily on telecommunications, internet and broadcast media. The Government’s disaster risk reduction strategy includes the use of monitoring and early warning systems some of which rely on telecommunications networks. Further, geo-mapping activities (e.g., Open Street Map) rely on availability of internet access.

1.87. Telecommunications is a major source of tax and royalty revenues for the Government of Nepal (GON). As such, overall sector revenues for 2014 were estimated at NPR 85,900 million (US$859 million) and GON received approximately NPR 3,450 million (US$34.5 million) in royalties. The two major telecommunications operators are some of the largest taxpayers in Nepal.

Issues arising in resilience

1.88. In the opinion of the World Bank, to tackle the persistent challenges of low investment and weak productivity, Nepal needs to dramatically restructure its public investment program; intensify the level of competition in the domestic market in sectors such as transport, logistics and telecommunication; reduce the cost of doing business; and steadily integrate the economy with the rest of the world. Many of the actions identified would positively impact on disaster resilience and are areas where the government is taking action.

1.89. Nepal's 14th Development Plan (2016/17–2018/19) targets annual average growth of 7.2% and a reduction in the share of the population living in poverty from 21.6% currently to 17% by 2018-19. Investment in infrastructure of US$13-18 billion by 2020 is estimated to be required. Infrastructure investment will address trade-related performance constraints and shortcomings in disaster resilience.

1.90. The January 2016 report of the Logistics Cluster identified air and road transport, and Remote Access Operations as areas where lessons could be learned from the response to the 2015 earthquakes. For example, to facilitate access to areas inaccessible by road transport and by air, a
A system of transport of relief supplies with porters and pack animals was set up. Box 5 explains the important role played by air services in the aftermath of the 2015 earthquakes.

1.91. Tribhuvan International Airport (TIA) is nearing passenger capacity and the domestic terminal is operating beyond capacity. A modernization in four phases is being undertaken. The feasibility study and construction of an alternate airport in Kavrepalanchok is being expedited to manage the air traffic pressure at TIA, although its financial viability may be in question. Another international airport at Nijgadh is to be constructed. The total project cost is US$6.7 billion (including the development of an airport city). The Pokhara Regional Airport is being upgraded to a regional international airport. The Gautam Buddha Airport is also being transformed into a regional international airport at a cost of US$90.6 million. Construction of domestic airports will be expedited. A master plan will be prepared for the expansion of domestic airports.

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Box 5: Humanitarian Air Services in Nepal

The UN Humanitarian Air Services had completed 4,848 flights and airlifted 2,704 tonnes of humanitarian cargo by December 2015. These flights were carried out on behalf of 140 organizations comprising of NGOs, United Nations agencies, donors, government counterparts and other humanitarian partners, reaching some 155 destinations. The country's unique setting and the monsoon season made it challenging to deliver aid to many communities in Nepal's mountainous terrain, which were accessible only by air. Requests received for UNHAS services were 40 per cent higher than anticipated. As a result of the operation being air-access intensive, the UNHAS aircraft flew more hours than originally planned. There was persistent demand for air capacity and at the height of the response, more aircraft than initially planned were used.

Source: World Food Programme

1.92. Under a liberal, open sky approach Nepal has signed bilateral air service agreements and MOUs with 36 countries. The bilateral agreement with India calls for the provision of 30,000 seats per week and unlimited air cargo flights between six metropolitan cities of India and Nepal. Similarly, there are 10,000 seats per week to seven Chinese cities under that bilateral agreement.

1.93. As a landlocked country, Nepal is dependent on the transit of goods through India (mainly the port of Kolkata) to international markets. This imposes significant transport costs and delays on Nepalese exporters. The economic effects of the disruption of essential supplies further highlighted the dependence of Nepal on transit transport links. As these disruptions dissipated, Nepal's exports to India are also recovering. Exports to China have seen robust growth but still comprise only 5 percent of total exports, while exports to India account for 60 percent. Hence, even a smaller growth of exports to India provides a greater thrust on overall improvement in exports.

1.94. Nepal and India have concluded various bilateral treaties: the Treaty of Transit, Treaty of Trade, Railways Services Agreement, and Agreement of Cooperation to Control Unauthorized Trade. The Transit Treaty allows Nepal to trade with other countries through the Kolkata/Haldia ports and, since 2016, Vishakapatnam. The revised Treaty of Trade with India, signed in October 2009, replaced its 1991 predecessor. According to Article XII of the Treaty, it is automatically renewed every seven years, unless one of the parties informs the other to the contrary. Under the Treaty, Nepal and India accord each other unconditional MFN treatment, and a mutually agreed list of primary products are exempt from customs duties and quantitative restrictions on a reciprocal basis.

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basis. Industrial products from Nepal are given (non-reciprocal) access to the Indian market, free of customs duties and quantitative restrictions. 93

1.95. Trade and investment relations with China has significantly grown in recent years. In the first eight months of FY 2017/18, Chinese investors constituted 28.7 percent of the total number of industries that got approval for foreign investment. China is Nepal's second largest trading partner.

1.96. Bilateral trade relations with Bangladesh gained momentum after the operationalization of Kankadhitta-Phulbari-Banglabandh transit route, and over the years Bangladesh has increasingly been an important trade partner of Nepal. Nepal is working together with Bangladesh to enhance trade cooperation, including power trade and to narrow down trade imbalances. Nepal also participates in two overlapping regional agreements: The South Asian Free Tree Area (SAFTA) and the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC); and in 17 bilateral agreements.

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