Early Agricultural Market Led Recovery in the Context of the 2015 Nepal Earthquake

The Importance of Markets in Disaster Recovery

Functioning markets for goods, services and commodities are essential for development and growth. Hence, in the wake of a disaster, early market recovery is crucial in ensuring sustainable recovery. In Nepal, agriculture is an important sector, providing employment opportunities to 66 percent of the population and contributing to 35 percent in the GDP\(^1\). It is therefore critical that agricultural markets be considered and supported in early disaster recovery following the recent earthquakes.

This process is complementary to cash-based recovery mechanisms being employed with affected households, which work at the demand-end. Households with cash can allocate this to the items they feel are most important for their recovery if markets are open and functioning to some degree. However, the supply, and the suppliers of important items need to also be present and functioning.

Agricultural sector actors such as input retailers are operating alongside the relief efforts of the international community that commonly involve the widespread distribution of goods (such as seeds and agricultural inputs) that may otherwise have been available in the market, and hence face the threat of market distortion in the aftermath of the disaster. As the recovery phase begins in Nepal, the focus should shift to considering the role that the market can play in this process and to facilitating this process. This will help avoid creating market distortion and dependency on external aid, and help affected communities to recover more quickly and sustainably in the long-run.

This paper seeks to contextualise the importance of market led recovery in light of the recent earthquakes Nepal. The disaster occurred during the fourth year of the UK Aid Samarth Nepal Market Development Program’s (Samarth-NMDP) five-year implementation period. Already well established in the agriculture sector in Nepal, this placed Samarth-NMDP in a position to assess and monitor the affects of the earthquake on the agricultural market in Nepal and to identify areas of recovery intervention that are inclusive of established market players in the sectors.

Framework for Market-led Recovery

Markets are important for providing income, employment, goods and services to the poor people. Following a disaster, it is therefore important that aid transfers avoid undermining markets, and help them recover so that they can remain in businesses and continue to service the needs of vulnerable communities. In practice this means:

- **Being evidence-based**: Understanding, and assisting market players to understand, the impact of the emergency upon key markets that are important for livelihoods, and potentially for early recovery. Using rapid assessments of markets affected by the emergency to understand the effects on markets that the poor are heavily involved in for their food security and livelihoods.

- **Avoidance of undermining and distorting markets**: by supporting markets to recover quickly and return to delivering goods and services to; and employ and trade with affected people. Working with and through market players to deliver relief where feasible so that they remain in place for recovery.

- **Facilitation of legitimate market players (private and public)**: working with and through existing market players, rather than acting as a deliverer of direct goods and services to affected people. This helps to avoid undermining markets, and ensures that recovery is sustainable. It also reinforces the legitimacy of market players in the recovery process. Assisting affected market players – and therefore the markets - to recover helps them return to normality as quickly as

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possible to ensure affected households can purchase what they need, and return to their normal income-generating activities.

These principles need to be considered both in the design of early recovery programmes and in selecting partners to implement and manage them; i.e. those with experience in emergency market facilitation, as well as contacts on the ground.

**Context of the 2015 Nepal Earthquake**

On 25 April 2015, at 11:56 local time, a 7.8 magnitude earthquake struck Nepal with its epicentre located 81 km northwest of Kathmandu. As at June 1, 8,698 people are estimated to have died and 22,487 people to have been injured. Furthermore 489,000 homes have been destroyed and 260,000 homes damaged across 14 districts. The degree of destruction varies across and within these districts with six districts (Dhading, Dolokha, Gorkha, Nuwakot, Rusuwa and Sindhupalchok) considered to be the most seriously affected.

The international humanitarian response began quickly, with $302.5 million is funds raised to June 01 2015, coupled with a surge of human resources and logistical support across all clusters of assistance. The Government of Nepal (GoN) is coordinating the response, notably through the system of Chief District Officers, in collaboration with the army. The GoN has initiated early recovery discussions, and the Ministry of Finance will launch a Reconstruction Fund for the affected areas. In parallel to this, the aid community is planning both conditional and unconditional cash transfers to affected households imminently.

**Analysis of the Impact on the Function of Agricultural Markets**

In the most affected districts, the majority of the affected population are mixed smallholder farmers producing a combination of cereals (wheat, barley and oats in the dry season; rice and millet in the monsoon) and dairy products from buffalo and cattle. Monsoon vegetables are more or less important depending on proximity to markets.

In late May, Samarth-NMDP worked with, and through, key market actors to assess the impact on the functioning of agricultural markets in the vegetable, dairy and agro-inputs sectors. Partners for the rapid market analyses (RAMs) included the Federation of Fruits and Vegetable Entrepreneurs Nepal (FEFVEN) for vegetables, the Pesticide Entrepreneurs’ Association of Nepal (PEAN) for agri-inputs and the Central Dairy Cooperative Association Ltd. Nepal (CDCAN) for dairy. These actors not only have extensive networks in their respective industries, but also have an important role to play in both delivering and coordinating efforts in early recovery.

The following section outlines the major impacts observed in the three sectors. The full analyses can be found at [http://www.samarth-nepal.com/resources/post-earthquake-activities](http://www.samarth-nepal.com/resources/post-earthquake-activities)

There were a number of overarching effects to the market in all sectors, as evident in the analyses. These included:

- **Significant drops in demand:** for raw products (milk and vegetables) as well as agricultural inputs. Demand for vegetables and milk in major markets, such as Kathmandu, were reported to have reduced due to temporary migration of people (and traders) from Kathmandu Valley, disruption to retail trading (particularly immediately after the quake) and decreased demand from schools, restaurants and some hotels. In vegetables, this has been witnessed at all levels of the supply chain resulting in downward trends in most prices (except tomatoes) and decreased incomes of market actors. In the dairy sector, the RAM indicated reduced demand due to out-migration from Kathmandu and damage to collection/processing facilities. The supply-end of the

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3 Compounding this is a further magnitude 7.4 at 12:50 on 12 May with its epicenter 76km east-northeast of Kathmandu and a magnitude 6.3 located 83km east of Kathmandu


dairy value chain has also been disrupted by loss of livestock and damage to collection infrastructure. Agrovets also reported a sharp decline in demand from farmers for inputs, reportedly as a result of shifting priorities and diversion of resources as well as due to distribution of inputs (i.e. seeds) from relief agencies, reportedly resulting in significant losses of sales.

- **Labour availability and cost:** The decrease of family and hired labour availability at all levels (from producer to retailer) was noted as people were engaged in other disaster recovery activities or have left certain areas. This has reportedly also increased the cost of available labour in many areas.

- **High losses of, and damage to, infrastructure** including:
  - Collection centres, plastic houses/polytunnels and small producer level irrigation systems (vegetables).
  - Dairy equipment and buildings/shelters at the farmer level and at collection/chilling centres. In Sindhupalchok for examples, an estimated 18 chilling centres were reported to be non operational at the end of May and funds were lacking to repair these. Cheese production centres in the high hilly regions have also been damaged.
  - Trading premises (as well as loss of stock) (agrovets). However, effects of damage to infrastructure has been reported to have been ameliorated to a certain extent with construction of temporary trading and storage facilities.

- **Disruption to transport availability and cost:** at all levels of the supply chain.

Additional sector-specific effects on the market were also noted, as detailed below.

**Agricultural Inputs Sector**

A key effect noted in the agri-input RAM (but also relevant to other sectors) was a *disruption to the functioning of credit* across the supply chain with agrovets experiencing default by farmers and retailers. Together with significant financial losses, this has also been reported to have resulted in the return of stock from farmers to agrovets and from agrovets to wholesalers when demand dropped to negate credit risk and/or if storage facilities were damaged. This has led to a reduction in stock on hand at many levels that may cause shortages when demand returns.

Thus sales in the Kathmandu valley will likely be severely disrupted in the upcoming season, given the **reduced demand and the decrease in stock levels** due to return of stock to wholesalers. If the agrovets do not stock for the next season, supply will further hindered by the upcoming monsoon. It is vital that in parallel to the roll-out of cash and voucher-based schemes as part of the relief effort, the supply-side of inputs is restored so that they are appropriately stocked with the items that farmers will need to buy with their cash. This will involve addressing storage problems and the breakdown in credit relationships across the supply chain.

**Dairy Sector**

Together with loss of infrastructure, the dairy sector has also experienced a significant **loss of livestock and decreased milk production** (by approximately 40%). Compounding this, a reduction in feed availability is being experienced following damage to storage facilities, limited cash resources and, in some cases, limited supply through dealers and other suppliers. This has placed surviving livestock under serious nutritional stress, affecting both production and reproduction capacity.

**Vegetable Sector**

In addition to the above overarching affects, producers displayed a **reduced confidence to plant** vegetables for the coming season due to current drop in demand and prices, with many producers reported to be considering switching to other income generating activities in the coming season, such as hired labour. To compound the current issues, effects of changes in supply of monsoon season vegetables is anticipated in the coming seasons. For example, Sindhupalchok and Dolakha are emerging
hubs for the production of leafy greens, cabbage and cauliflower vegetables to Kathmandu markets, in May/June particularly, but markets have been seriously affected in these areas as a result of the earthquake. FEFVEN anticipates a disruption to supply particularly of these vegetables in the coming months that will have supply and price implications in Kathmandu.

Response Intervention Options

Operational Considerations in Designing Response Interventions

As detailed above, the RAMs demonstrate a clear need for support to a range of market players in order to support market-led recovery. In designing and implementing support interventions, there are a number of overarching areas to be considered by market development agencies and the broader emergency response community.

i) Urgency, Agricultural Season, and Accessibility: Interventions can be prioritised based on considerations such as urgency, agricultural season, and accessibility. For example, the low basins, mid hills and high hills grow different crops and have a later season as altitude rises. Remote VDCs are by definition largely inaccessible by road, and what access they do have is likely to be further reduced as the monsoon brings further landslides. In the accessible VDCs, the rice-planting season begun at the end of May when seedling nurseries were to be prepared and land cultivated. In addition, livestock – especially dairy animals – require timely attention to avoid further loss of condition and disease before access becomes more of a challenge.

ii) Good Governance and Do-No-Harm: The civil war ended nine years ago, and social and ethnic divisions that fuelled it are still potential trigger factors for instability. Potential dividers, implicit moral messages and resource transfers need to be carefully planned in order to avoid raising tensions in this already tense time.

iii) Vulnerability of Consumers: A further consideration is the urban and peri-urban consumers inhabiting the Kathmandu valley who are supplied dairy, vegetables and cereals from the impacted area. If production drops, the deficit will have to be made up from elsewhere. In the case of Nepal this may mean increased imports and rising consumer prices.

iv) Feasibility: Proposed interventions need to be feasible. This means they need to lie within the competency of the implementer and the market partners involved.

v) Activities of Other Agencies and Coordination: Coordination is key to ensuring that resources are efficiently deployed to respond to the emergency in providing for affected communities, so that duplication is avoided and economies of scale can be reached. The Food Security Cluster coordination system is operational and well attended, although obtaining accurate and timely information is always a challenge for all parties.

Areas for possible intervention below relate directly to the vegetable, dairy and agri-input sector and are based on the specific findings of our RAMs in these sectors. Interventions in other agricultural sectors remain highly relevant and should be considered and designed with the overarching aforementioned principles as a foundation.

Further analysis would be needed to assess the feasibility and exact mechanisms behind these interventions below prior to uptake. Consultation with those coordinating the emergency response (including Government) is important when considering implementing interventions related directly to the emergency response (primarily those at the producer and collection centre level). Furthermore, Samarth-NMDP and FEFVEN/PEAN/CDCAN are available to make introductions to potential partners, if required.

Agricultural Inputs Sector

The agri-inputs market requires short and medium-term responses to enable market actors to recover and return to a point where the market system is functioning again. Initial areas for intervention in the agricultural input sector include:

1. Enabling input suppliers to access credit in order to restock in readiness to supply smallholder
input and tool requirements for the next planting season through interventions such as:

a. Temporary interest rate subsidies/buy down to make restocking affordable, either administered directly to agro-vets or through wholesalers.

b. Validation of credit needs and assessment of emergency credit options on the market, possibly including ‘branchless banking’ agency-based models.

c. Support in development of suitable products and brokering of products to agro-vets

2. Once farmers’ needs for shelter and psychological recovery have been met, assisting access inputs and services required for the upcoming crop seasons in the recovery phase through the market by the provision of affordable credit options, tailored technical support and facilitated access to input and output markets. This will encourage them to meet their needs through market channels rather than via distorting parallel aid provisions. Possible intervention areas include:

a. Validation of needs in producer and agro-vets communities and appropriateness of proposed strategies.

b. Establishment of partnerships among producers, agro-vets, financial service providers and traders and interested support organisations to deliver a subsidised, comprehensive support package for the resumption of farming activities.

c. Support in implementation with subsidies and technical inputs as appropriate

**Dairy Sector**

As evidenced in the dairy sector RAM, the supply-end of the dairy value chain has been disrupted by loss of livestock and damage to collection infrastructure and the demand end from reduced demand due to out-migration from Kathmandu and damage to collection and processing centres. Whilst the reduction in consumer demand is likely to be temporary (people have largely returned to Kathmandu) – the effects of the loss of market access from the loss of collection centres is likely to last for several months. The effects of the loss of livestock assets from death, injury, nutrition stress, reduced fertility and disease are likely to have ramifications for years. The priorities for intervention therefore lie in:

1. **Safeguarding productive dairy livestock assets** to ensure return to productivity as soon as possible through interventions such as:

   a. Providing nutritional support to dairy producers to safeguard animal health in areas where feed supply is limited by facilitating the distribution of feed supplements to affected dairy producers, through existing supply chains, to safeguard animals from nutritional stress. Distribution could be facilitated by existing industry bodies and/or by manufacturers and agrovets.

   b. Supporting producers to repair infrastructure and equipment such as reconstructing animal shelter to protect animals for the upcoming monsoon season and making repairs to milking equipment.

2. **Bringing milk collection, chilling and processing infrastructure back into operation** to return market access to smallholders through interventions in areas such as:

   a. Supporting the repair, construction, or reconstruction of collection/chilling/processing facilities through supporting the provision of materials and equipment and/or construction support.

   b. Facilitating relationships with financial service providers and processing facilities to improve access to finance for repair work.

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6 Samarth NMDP is currently commencing an intervention in this area although there is still certainly scope for additional support in livestock nutrition for other agencies.
Vegetable Sector

As evidenced in the vegetable sector RAM, markets in some of the less affected vegetable producing areas are still functioning. Others are facing greater challenges. Minimising disruption to vegetable production and supply is critical to ensure early market recovery in the vegetable sector, for both producers and consumers. The RAM indicated a need for some short, medium and long term interventions to restore affected vegetable production and stabilise livelihoods across the supply chain. Possible areas for intervention include:

1. **At the production level**, assisting vegetable producers to recover from direct and indirect losses, to be resilient to shocks from market distortions and to return to vegetable production and trade where possible through areas of interventions such as:
   a. Facilitation of interaction between producers, traders, agro-vets, input suppliers and DADO to address the drop in confidence in the sector and disruptions to relationships.
   b. Development of contract-farming schemes, or trade-facilitation using temporary transport subsidies to open up new trade relationships – e.g. with Indian traders, or those from other areas of Nepal.
   c. Provision of assistance with cash/credit schemes or limited subsidies for input supplies to increase uptake of inputs and benefit production going forward. **It is vital that this be undertaken through the market** – i.e. through agro-vets and input suppliers, in order to ensure that these remain open and functional.

2. **At the aggregation level**, support to damaged collection centres to allow them to remain operational and ensure the market remains open for vegetables from the affected regions through:
   a. Facilitating distribution of suitable materials for damaged collection centres to construct temporary shelter for trading and storage into the monsoon season. This may be in the form of corrugated iron sheets or other similar building materials. **Support in this area is critical in the coming weeks to ensure the markets continue to function.**

3. **At the wholesale/retail level**, support the industry to ‘build back better’ during early market recovery through interventions such as:
   a. Supporting wholesalers and retailers, where necessary, in their efforts into post harvest improvements as well as those around trading, packaging, and labeling in line with the principles of ‘building back better’ highlighted within the recent Draft Food Security Cluster Agricultural Livelihood Impact Appraisal. This can also apply to repairs to packhouses and collection centres.
   b. Supporting existing providers of market information systems to develop an improved information platform that allows for volume and price information to be entered and uploaded rapidly.

4. With regards to **finance**, support market actors (from producers through to retailers) to access sufficient finance to function in the vegetable sector through:
   a. Potential facilitation of credit schemes and/or contract growing schemes which may be appropriate in some instances as may limited, short subsidies on some inputs to re-stimulate the sector in a currently risky climate.

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7 Samarth-NMDP has an existing intervention in this area.
Further Information

For further information and/or for introductions to potential partners, please contact:

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