



**Department of Agriculture
Muzaffarabad**



**FAO
Livelihood Support Programme**

PAKISTAN EARTHQUAKE SECOND RAPID LIVELIHOODS ASSESSMENT

Summary

This is the second Rapid Livelihoods assessment to have taken place since the earthquake that occurred in northern Pakistan in October 2005. The first reported on the immediate depletion of assets across the agro-ecological zones, and how people were beginning to deal with their losses. At that time, trauma was intense, and people had no idea how they would cope, with winter imminent. This second survey found that strong social cohesion was one of the main compensating factors that permitted those that stayed to survive. Whilst some migrated away from the area, this was a last resort and virtually all have returned. However, the livelihoods of the majority are still very fragile. Sources of income have not been restored, and houses have not been rebuilt. The monsoon has arrived, and the second winter is not far away. Agriculture has taken a back seat and is not yet a high priority again in people's lives. Messages for decision-makers are highlighted.

Messages for rehabilitation decision-makers

Trauma. People are still traumatised and finding it hard to get back to work. Depression is common among the worst affected, in particular those who have lost immediate family. *Little if any psycho-social support has reached people in rural areas, and it will take longer for them to start to recover their livelihoods if this is not offered.*

Housing. The large majority of people have not yet rebuilt permanent housing, and are living in temporary shelter. The monsoon has arrived and only a short time remains before winter sets in. Rebuilding safe homes is people's all-consuming priority, and every effort should be directed to support this. *People will only devote energy and resources to restoring their livelihoods when they have secure housing.*

Migration. Most people stayed put in makeshift housing over winter, and managed to survive by helping each other out. Some 40% of people living at higher altitudes migrated as a survival strategy, often doing so at the last minute, and returning as soon as they were able. Almost all in AJK are owner-occupiers, are highly resilient, and do not want to leave their property, despite the dangers. *Relocation is unlikely to be successful and should be only used as a last resort; disaster risk reduction is the only long-term solution.*

Agriculture. Income from agriculture has been decimated. Farming has been haphazard since the earthquake, and has provided at most enough for home consumption. It is a low priority at present and it will not start to support livelihoods until well into 2007. Continued support initiatives will be needed until then. *Seed and fertiliser should continue to be provided gratis until well into 2007, or livelihoods from cropping will not be significant.*

Wheat. Because wheat seed and fertiliser were provided free in *rabi* 2005, a large area was planted, but varieties distributed were not always appropriate for the farming system of the area. Clear DOA variety recommendations exist and should be used. *Using inappropriate varieties will lead to reduced income from crops and at worst crop failure.*

Power: The cost of tractor operations for farming has at least doubled or trebled, forced to compete with better-paid reconstruction work. Ways of meeting these immediate and pressing requirements need to be addressed. *Until more tractors are made available, livelihoods from crop harvests will continue to be threatened.*

Paddy. Areas under rice production are reduced to 20% of normal, owing to broken water channels. This is a very important livelihood system in low altitude area. Priority must be given to repair of traditional rural water supplies for irrigation. *Until these are restored, livelihoods derived from the paddy crop will continue to be negligible.*

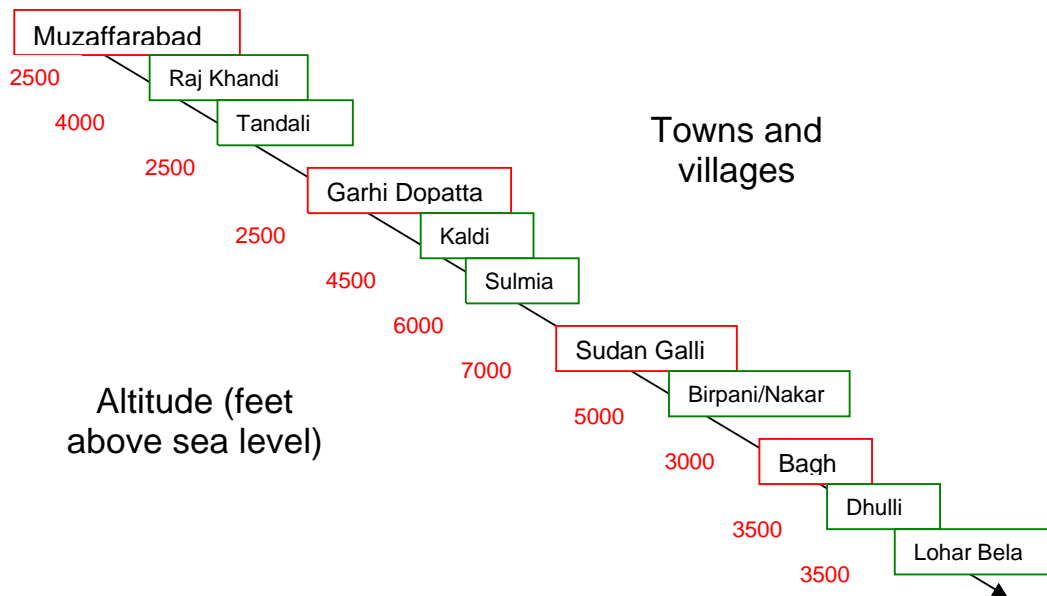
Livestock. Livestock numbers are down, both through mortality in the earthquake and subsequent slaughter. However, restocking is not the priority of most households (see housing), and it will again be a struggle to find shelter and fodder for remaining stock over the coming winter. *A widescale restocking policy might lead to further emergency sales and at worst a further destabilisation of livelihoods as people struggle to cope with scarce resources; it is not recommended at this stage.*

Background

In October 2005, a massive earthquake struck Northern Pakistan, causing huge loss of life, and for those who remained an often total devastation of their livelihoods. A Rapid Livelihoods Assessment was conducted in November 2005 by a joint team from the Department of Agriculture and FAO¹. During this visit, a transect was chosen across the affected area, for the purpose of conducting the survey. This transect was from Muzaffarabad to Bagh, proceeding up the Neelum valley and traversing high altitude zones over Sudan Galli, ranging from 2,500 feet above sea level to 7,000. In June 2006, a small team followed the same transect, and visited the same households. This is the report of that second visit.

Sampled transect

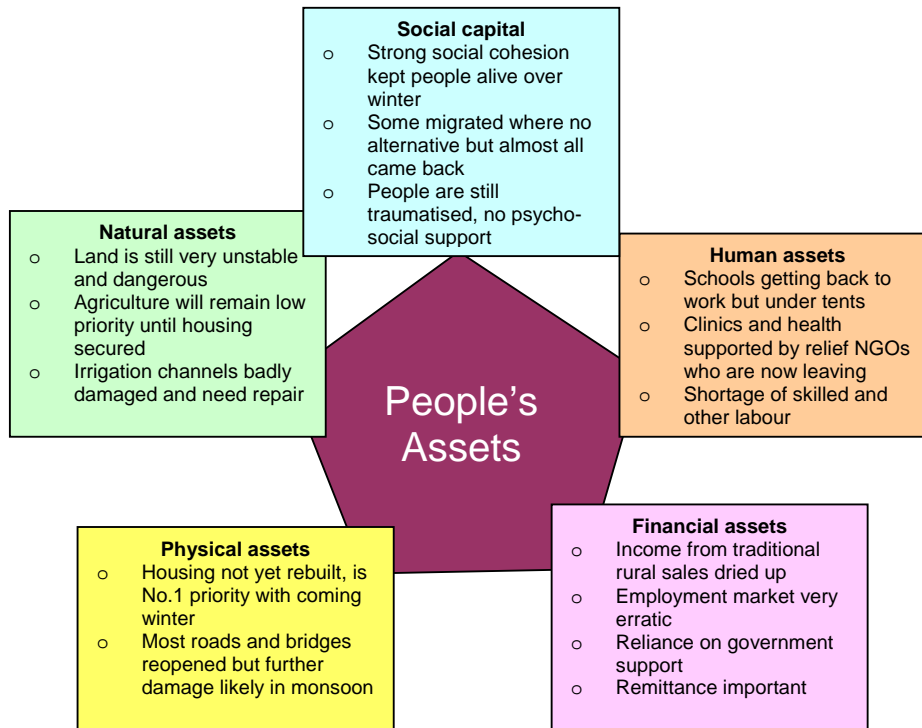
The following route was taken. This covers all three of the micro Agro-ecological Zones represented in the area, which are based largely on altitude.



¹ Rapid Livelihoods Assessment. Dept of Agriculture Muzaffarabad, FAO Livelihoods Support Programme, November 2005.

Asset summary

The diagram shows the main changes that have occurred since the earthquake regarding people's assets.



Social capital and community cohesion

Social cohesion. At lower altitudes where winter is less harsh and snowfall usually light, the level of migration was very low. Almost everybody who could stay, did so. In one survey village at low altitude (Tandali) nobody had gone. Many also at high altitudes decided to stay and stick out the winter. They were able to survive to a large extent by helping each other out, not only within households but also between. In the photo, 17 families at high altitude (Birpani) built makeshift huts which included communal facilities such as a community guest/meeting room.



Migration. At higher altitudes some 40% of people migrated. Of these, some (often the better-off) had relations outside the area and thus had somewhere to go. This group were the first to go. Others went who had to, sometimes living in a dangerous and weakened area with potential slides, and where no attempt to rebuild could be made. Lastly the poorest and most vulnerable went, who were unable to deal with snow and cold. Most of this group went to camps in Rawalpindi, where life was difficult and expensive. Arshad Begum (Kaldi) reported that she used up the Rs.25,000 compensation completely in living expenses.

A very high proportion of those who left returned as soon as they were able. Some 90% of those who migrated have returned, and most of the rest are reportedly on their way back too. Only a small proportion will not return. The people of this area love the place where they live, and for many who were forced to migrate the experience was not a good one. Any attempts at resettlement are likely to be resisted. Where it is inevitable owing to land destabilisation, local options should be given preference where possible, with minimal distances involved.

Islam is a very supportive religion; all are obliged to support the family but also to share with neighbours, whose rights are recognised, with codes of behaviour heavily entrenched. Many said that their faith helped them to deal with the worst hardships.

Trauma and apathy. People are still highly traumatised, are finding it very hard to get back to work, difficult to get back into routines and some semblance of normality. Depression among those worst affected is commonplace, and very little (if any) psycho-social support has reached rural areas. The relief effort is now declining. People know they have to get back to normal, but they are lacking in energy, and there is a sense of apathy. Facing the first winter immediately post-crisis, everybody was united against a common 'enemy', and this strong social cohesion helped everyone to get through. But now people are listless, nobody seems to have the resolve to put themselves back into life yet fully.



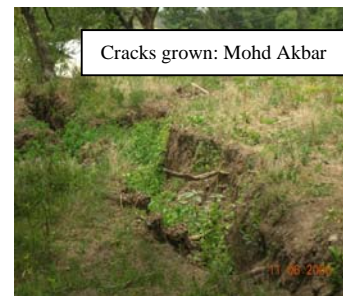
Munir: listless

There is a high level of uncertainty which attends this, and nobody is sure how to rebuild their homes. ERRA pressure to pay only for approved designs with closely monitored and rebuilds is making people nervous. A lack of guidance, leadership, and encouragement is apparent.

Marriages are carrying on as ever, even at an increased level. A high proportion of females died in the earthquake, and there is now a shortage of eligible women. Mohd Munir's wife had died (see case studies), and he is looking for a new wife. She had not only kept the family fed and functioning, but also was the main player in their livestock enterprise. Crippling dowries are still being payed ("we have to do this") which now even more than before, people can ill afford.

Natural and agricultural assets

Land. Many of the cracks which appeared immediately after the earthquake have increased in size (see photo). Smaller ones have been filled, and where these occur on terraces they have been ploughed over. However, the land is still very unstable, and there are fears that when the monsoon arrives that this situation will become worse, and that landslides will ensue. This provides an at best uncertain and at worst dangerous environment in which rural livelihoods have to be sustained.



Cracks grown: Mohd Akbar

Agriculture. Farming was haphazard over the last winter, and brought in little income. Milk sales from a heavily reduced population of buffalos and cattle have been negligible, with minimal shelter and fodder reducing yields to less than half the normal, often insufficient for domestic consumption. Income from sale of small animals and minor produce also dried up. Wheat seed and fertiliser was distributed

free of charge, and although this has led to a reasonable harvest, this remained unthreshed at the time of this survey, with rains imminent. The cost of threshing in some areas has trebled, and scarce tractors are engaged in reconstruction work. The kharif maize crop has been planted, but seed was in short supply and planting late. Paddy rice is estimated to be reduced to 20% of the normal planted area, owing to water channels which were destroyed and remain as yet unrepaired.

Wheat seed and fertiliser was given free for Rabi (winter) season 2005/6, and people tried hard to use it all ("god has given this to us and we should use it"). The result was an increase in overall area planted. However, wheat varieties distributed were mixed. Some barani varieties (rainfed, dry tolerant) were distributed and did not do well (maybe 50% normal yield). A greater area planted but with lower yields probably provided an overall harvest around normal. DAP ("black fertiliser") was provided free, many had not used it before on wheat. There were reports that they found it worked well and will use it again.

There were very few tractors operating on farms, with a big shortage for agricultural purposes. Most are being used for reconstruction work where they get a higher rate. The result was that where work did take place operators were in a hurry and the quality of ploughing very poor, and the equipment was very poor quality. The price of ploughing had doubled from Rs.3000 to Rs.6000 per 4 acre plot. Some tractor owners refused to plough where the cracks were too deep and/or dangerous. No threshers available for harvested wheat, with the crop stacked up everywhere, and the monsoon on the way. The price of threshing has gone from Rs.300 to Rs.750 per hour.



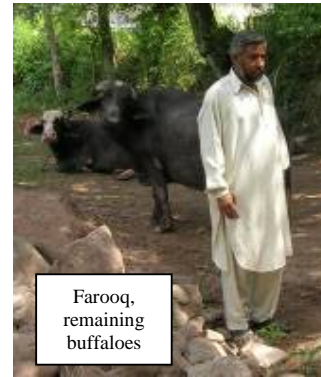
Where terraces are too narrow for tractors, particularly at higher altitudes, bullocks are used traditionally for draft purposes. However, many died in the earthquake and others were sold to butchers owing to lack of shelter and fodder over the winter. The purchase price of bullocks has now gone from Rs.40,000 to Rs.80,000 per pair, and they are now in very short supply for ploughing and weeding.

Maize seed was distributed too late for Kharif (summer) cropping 2006, and was not sufficient, although more attention was paid to the type of variety appropriate for specific agro ecological zones. There is a strong likelihood of the overall area under maize being down, and many farmers were interviewed who will not plant at all. This will be worse at high altitudes where planting is earlier and the season shorter. Weeding of maize presents a problem, with traditional 'sheel' operations (a combined weeding/thinning exercise done with bullocks) not conducted, or conducted laboriously by hand.



Paddy rice production will be very much reduced. Many water channels were broken by earthquake activity and only those with superficial damage have been repaired (20%); 80% of paddy fields remain without water and cannot be planted. Vegetable production is also threatened as they were also irrigated from water channels.

Livestock production is the subject of other, more detailed surveys. Many animals were killed in the earthquake, and many more were slaughtered afterwards as part of a coping strategy to permit immediate survival. This was in part to meet immediate demands for human nutrition and income, and in part because there was insufficient fodder or shelter for animals to survive the winter. Yields of milk from surviving buffaloes was down by at least 50% over winter, barely enough for domestic consumption. Reduction of assets in the form of the livestock herd was a practical strategy employed by people to enable them to survive the winter, enabling them to better use scarce resources in the most effective way.



Although some people may be ready to restock, most are not. The priority of most households is to get themselves and their families into secure housing before the winter, and restocking initiatives are likely at best to sidetrack these efforts, and at worst to threaten them. This is not to say that restocking should be discouraged completely, and it is likely that individual households particularly in lower altitude areas will be ready to do so. When restocking does occur, it will need to be done with the full engagement of the line department.

Human assets

People's capacity to work is still under threat, with the apparent lack of will to get back to normal. This is partly as a result of extended trauma, visible in particular among those who have lost close family members. In addition, the means and tools by which people earn a living are often in short supply. The labour market is in disarray. There is an overall scarcity of labour, as many artisans have left for cities where they can earn more; in addition, others who normally sell their own labour are more keen to rebuild their own houses and livelihoods first.

The high percentage of females who lost their lives and consequent shortage of womenfolk has lowered overall morale and provided an unusual skew in household economy, with the work traditionally done by women often now carried out inadequately. Livestock enterprises have certainly suffered and are hard to restart. In addition child health and care has also probably suffered.

Children, initially frightened to go back to school, have gradually become more confident and are attending makeshift schools which are functioning mainly in tents provided by UNICEF. However these are very hot in summer, and will not be operable in winter months, where more permanent structures will be needed.

Health needs have been met largely by NGOs during the relief period, but these efforts are now dwindling, and health services will need to be re-established and clinics replaced.

Physical assets

Housing. The large majority of people have not yet rebuilt permanent housing, and are living in temporary shelter. There is now a very small window between the end of the monsoon and the coming winter in which to do this. This is people's all-consuming priority, and all efforts should be directed to support this goal. There is a

big shortage of skilled labour to rebuild houses, and this will further slow down rebuilding efforts.

Some flexibility in approving the designs used by people when rebuilding their houses should be allowed by ERRA. Nobody will intentionally rebuild in ways that will again threaten their lives, and indigenous knowledge should be trusted.



Estimates for rebuilding a typical family house vary depending on design and materials, but at least Rs.250,000 will be required – significantly more than the ERRA compensation figures (Rs.25,000 immediate unconditional payment followed by Rs.75,000). Some households have been able to salvage some of the old timber and cut this up into planks for rebuilding, reducing costs somewhat.

Tents are in widespread use still, and are likely to be used for storage and shelter for some time to come. The best tents are Chinese and are valued highly. Other tents from different donors have different levels of quality, and have acquired value accordingly.



Roads and bridges. Most key bridges have been repaired or rebuilt, and most roads are open again. However, damage to roads is still widespread, and it will take many years before repairs are complete. In the interim, more landslides from destabilised land are likely to exacerbate the situation.

Financial assets

Sources of income. With the exception of remittance (see first RLA) which has without doubt sustained many households through the crisis, normal sources of income have either dried up, or have dwindled substantially. Livelihoods were supported by income from a wide and diverse range of sources, many of which have now dried up (vegetables, fruit, maize, chickens, NTFPs, firewood, etc). It is hard to see how livelihoods could have been sustained without financial support from government (Rs. 25,000 unconditional payment to house-owners, plus supplementary payments for those orphaned, widowed, disabled, old).

Many now await the Rs.75,000 which government has promised as the second instalment, release of which is conditional on paperwork and household circumstances, and on satisfactory inspection of approved construction standards. A conservative estimate for reconstruction of an average family house is Rs.250,000, so more resources will need to be found from somewhere.

Costs of living. Life was subsidised over the winter period, and this helped people to survive. Electricity and gas was free over the winter, enabling people to keep warm. Food was also subsidised. Health care from government and NGO sources was free. Seeds and fertilisers for rabi cropping were also provided gratis. However, that very necessary subsidy 'cushion' will be removed, and the realities of life are inflated costs. The price of everything has gone up (diesel, sugar, commodities). The unofficial daily labour rate has gone from Rs.250 to Rs.350 per day.

Employment. Individuals who normally sustain their livelihoods by selling their own labour face problems with an erratic labour market (see human assets). Others with jobs in other parts of Pakistan who were obliged to stay to support family, lost their jobs permanently.

Vulnerability context

People are still very vulnerable. There is an acute shortage of cash as the normal sources of income have dried up. Very few have rebuilt their houses, and almost all are living temporary accommodation. Life is still very tenuous. On top of this, time and the climate are not on their side.

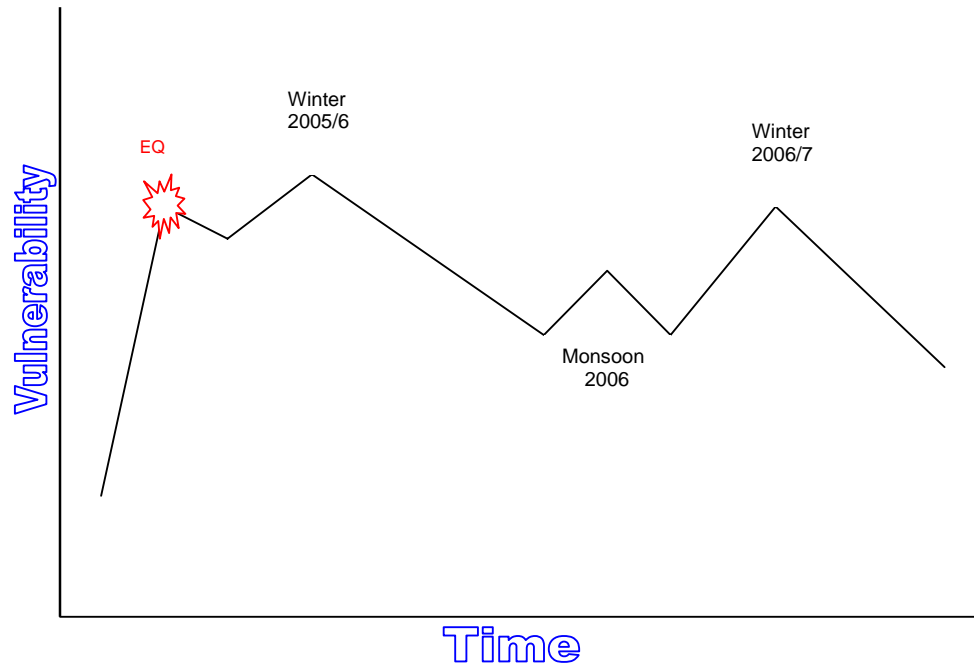
The coming monsoon

The earthquake has destabilised hillsides, leaving unsettled soils and many deep cracks, and causing small rockfalls which are both frequent and dangerous. This alone would make life difficult, and lives vulnerable. However, in addition to this the monsoon season has started ahead of schedule this year. Torrential rains will follow cracks deep into the subsoil, and further weaken the structure. There can be little doubt that further landslides are going to occur on hillsides. The extent and severity of these can only be guessed at, but provide a major source of worry and concern to those who live in their shadow.

Winter again in sight

The monsoon season will slow down any rebuilding work for a number of weeks, and time is now running out before the winter once again sets in. It is unlikely that the area will be blessed with the good luck of another mild winter that was experienced in 2005/6. Migration again as an option will be neither easy nor popular. If people are to be able to survive the second winter, they will need proper housing, and this will take both time and resources. Being unprepared for on-coming winter is the over-riding fear of all households, and rebuilding is the number one concern and priority.

The diagram illustrates how vulnerability may alter over time. The level of vulnerability is always high in this region, and it will take many years before the situation again becomes stable. Permanent disaster risk management will have to be an important component in any future strategy, to reduce the underlying causes of risk where possible.



Coping strategies

Migration was a strategy used for survival, but it was one used sparingly. Only where it was unavoidable did people migrate, and many of these did so at the last minute, returning as soon as they were able. However, as a strategy it worked, and enabled people to manage over the most harsh winter months. The photo shows Arshad Begum's hut in Kaldi (4500 ft), which was not warm enough in coldest months, obliging her to migrate.



For those who did not migrate, survival was made possible by ingenuity, hard work, significant hardship, the assistance of some good NGOs, and a huge amount of social cohesion. Using what materials they had to hand, they hastily built temporary shelters (timber, mud, GI sheets). Often large families at high altitudes huddled together in tiny buildings, shared with remaining animals, but they were still cold. Thankfully it was a light winter, with only one major snow (0.5 metres), and this no doubt contributed to survival. Where roads were blocked, they walked to bazaars. Survival would certainly not have been possible if communities had not stuck together and helped each other. Lower altitude households were less threatened, and survived the winter in tents and other makeshift buildings.

Another survival strategy was to liquidate assets, and selling livestock represented one major way of doing this.

Livelihood outcomes

Immediately after the earthquake, people were unable to think at all about the future, and were concerned only with dealing with immediate concerns regarding loss of life,

and in finding some measure of safety and security for the immediate future. They have largely succeeded in this.

By now things are somewhat different, but survival is still very much the key issue. Life is still very vulnerable, and things look very uncertain. Just getting back to normal (this was mentioned many times) is as much as most people aspire to, and even this is very difficult for many. Normality – or a least some measure of stability – is still a long way off, 2-3 years at least. And in the interim livelihoods will remain very fragile. Immediate concerns are to do with getting secure housing, with the monsoon arrived and winter getting close.

Farming looks unstable, with many even committed farmers are wondering if it is worthwhile the effort. It was never an easy livelihood and everything has now become more difficult.

People have managed to survive the winter by using a variety of means and coping strategies. Whether they either stayed or have recently returned, their primary aspiration now is to get into permanent housing before the winter. Agriculture is a low priority. They aspire to little more than “getting back to normal”, something which can maybe never happen. Building back better is an aspiration to which the authorities should adhere, and this will require support at all levels, including disaster risk reduction strategies.

Case Studies

Abdul Farooq comes from a village about 20 kms West of Muzaffarabad (Tandali), up the Jhelum Valley in a village which lies at about 3,300 feet above sea level, close to the river and alongside a metalled road. This is one of the worst affected areas, and around 25% of the village were killed in the earthquake - 2 close family members were lost.

Immediately post-earthquake: His 'Kacha' house had collapsed completely, and his 18 month-old son miraculously rescued; many possessions lost in the wreckage including ancient hand-written religious scripts. Livestock mainly survived, but main livelihood had been selling surplus milk, and yields had dropped to almost zero. The kharif maize crop was not harvested, and seeds for coming rabi crop were destroyed. Kitchen garden had been ruined by chickens and rodents. Small tools, implements and equipment were destroyed, terraces were damaged, and the irrigation system was broken.



Eight months on: The family are living in a cluster of tents around the old home, and have made no serious attempts yet at rebuilding. Being at low altitude, they stayed put over winter. The family consider themselves to be serious farmers, but are disillusioned by the interminable difficulties associated with getting their farming enterprise up and running again. Tractors and other inputs are in short supply, the price of everything has risen, and above all they have very little income. Although milk production is rising, there is insufficient available for sale still. They were unable to



plant paddy as irrigation channels are not yet working properly. Abdul used to be a driver, and is seriously considering returning to his old trade.

Mohd Akbar lives in a village at high altitude - around 7000 feet asl - between Muzaffarabad and Bagh, in one of the worst affected areas (Sudan Gali). This village is normally cut off for 2 months of the year by snowfall.

Immediately post-earthquake: his sister and a daughter were killed in the house on the right. He lost most of his livestock, 2 buffalos and 3 cows. He owns about 1.5 acres of land. Terraces were badly cracked, with terrace walls in places collapsed and fruit trees lost or damaged. Seeds, tools and implements were lost.



Eight months on: Akbar and his family decided to stay on, although they live above 7,000 feet where snowfall is heavy. They survived in a small shed in which 17 of the family slept, along with the remaining buffalo and a calf. Their small community helped each other out, walking several kilometres



to the bazaar for provisions when the roads were blocked with snow. Since then they have made progress in rebuilding, and are doing so according to the new standards set by ERRA. They have had no time for agriculture since the earthquake. Some cracks across the terraces have got worse, and are not any longer ploughable.





Arshad Begum was widowed some 10 years ago, and is around 70 years old. She comes from a village that lies at around 4000 feet, and which was very badly affected by the earthquake (Kandari).

Immediately post-earthquake: She had her own 'kacha' house which collapsed totally. All her livestock were inside the house and were killed – a Punjabi cow and bull, and two calves. She is landless, and made her living from sales of small produce from her holding and from the forest – mainly from the milk, but also the odd chicken, and fuelwood. Her son, when he has recovered, also earns money selling his labour in the area.

The new threat - a massive landslide that blocked the local river and made a huge new earth dam – did not materialise since water levels did not quite reach her village. A huge new lake has however been created.

When snows started, she decided reluctantly to migrate with her dependents to the refugee camps in Rawalpindi. This was not a good experience and they found it very expensive. They spent the entire Rs.25,000 handout from government on living expenses, and returned as soon as the weather would allow.



She has made little attempt to rebuild (see picture on the left) and does not have the capacity or resources to do so. All her previous sources of income have dried up, and her livelihood is totally insecure. Her income is now restricted to whatever her son – fully recovered – can bring in from his own labour.



Mohd Munir had tragically lost almost everything. He is 35 years old, and lives in a village above Muzaffarabad that looks down on it, at some 4,000 feet asl. The morning of the earthquake his wife and daughter were out on the steep hillsides with other women from the village, cutting grass for hay. There was a landslide under them and they all fell. Their bodies have not been recovered to this day. He also lost 2 buffalos, a cow and some goats. The family are landless. They made most of their income from sales of milk - this was mainly his wife and daughter's work. He himself was a local tailor, but his small shop and his 3 sewing machines were completely destroyed.



Eight months on: Mohd Munir is depressed. He is apathetic, and has no energy to get on with his life again. His brother-in-law has bought him a new sewing machine, but he has no real interest in using it. He lived with his 4 surviving children in a shack over winter.



The bright spot is that he has managed (with support again from the brother-in-law) to build the foundation of a new house using the Rs.25,000 handout. The family is looking out for a new wife for him, as the children need more support than he can offer.