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APPENDICES

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6.16 Livelihoods

This section draws on the analysis described in Section 6.15 regarding impacts to land. This section addresses the Project's impacts upon various aspects of the livelihoods of nearby communities, as follows:

- Economic displacement of land owners and users; and
- Economic displacement of herders.

In line with the requirements of IFC PS 5 and EBRD PR 5, a Land Access and Livelihood Restoration Plan (LALRP) was developed to address economic displacement impacts caused by the Project, specifically focussing on the impacts to land owners and land users including seasonal herders. Following project changes, an Addendum to the LALRP has also been developed (see Appendix 8.23). This chapter provides a summary of the land acquisition and livelihood restoration measures; full details are available in the LALRP and its Addendum which are also disclosed publicly. The activities required by the LALRP will be implemented over a number of years to ensure their sustainability.

6.16.1 Physical and Economic Displacement of Land Users and Land Owners

Project Activities Affecting Physical and Economic Displacement of Land Users and Land Owners

Land required for the construction and operation of the Amulsar Project is located in the communities of Gndevaz, Saravan and Gorayk, as illustrated in Figure 1.2. Only state land will be affected in Gorayk, whereas in both Gndevaz and Saravan, private landowners will be impacted.

In terms of their impacts on land use and livelihoods, Project facilities can in summary be classified as follows:

- High elevation areas, above 2,000 m asl. Location of mine pits and facilities, including the existing exploration camp, crushing facilities, BRSF, truck shop and administration facilities, explosives magazine, and part of the conveyor. There is no private land in these high altitude areas and changes to current land use will be limited to impacts on hay cutting activities around the BRSF and herding patterns by a number of seasonal herders who graze their livestock in the area during the summer months (May – September/October).

- Lower part of conveyor, electricity substation, mine access road and quarries. The affected land area is used mainly for hay and wheat production.
- Lower elevation areas under 1,700 m asl. Location of the HLF, including the ADR Plant and temporary construction camp. These areas are used for agricultural production, including orchards (mainly apricot), wheat and hay.

Potential Physical and Economic Displacement Impacts to Land Users and Land Owners

The extent of physical and economic displacement generated by the land impacts described above depends upon the current use of the land by households, the number of households impacted, the duration of the impact, land tenure and potential vulnerabilities within affected households. Each of these topics is addressed in turn in this section.

Types of Land Use

Several types of agriculture are observed in different parts of the affected area:

- Mainly found in the north-west of the HLF footprint, a number of small plots are used for garden crops; part of the produce is sold but a significant portion is retained for consumption at home and preserves. These plots host a mixture of garden crops (typically potatoes, fruit trees, and tomatoes, maize, pepper, cabbage etc.)
- The valley that forms the bulk of the HLF footprint is used for apricot plantations, see Figure 6.16.1 (approximately 25 ha of orchards in total). These are a relatively recent extension of the main apricot areas of Gndevaz, which are located immediately to the south of the residential area where irrigation water is available. These orchards are run as businesses, with farmers using a combination of family and paid workers, and all the produce sold. Interspersed within the apricot orchards a few plots are used for annual crops, particularly spring wheat, maize meant for silage, and barley. Some of the apricot farmers have used a small part of their orchard for a garden. In some cases, the farmer collects the hay that grows in between the apricot tree rows.
- Higher in the mountain (eastern end of the HLF, conveyor) colder climate combined with steeper and rockier terrain are such that land is dedicated to natural grass. Where tractor access is possible, hay is gathered and taken back to Gndevaz, otherwise land is simply used as pasture.



Figure 6.16.1: Apricot orchards in the lower part of the heap leach facility site

Scale of Impact

The heap leach facility will affect a total of 252 private land plots, and a total surface area of private land of 138.9 ha. Land acquisition has been divided into a series of phases, with Phases 1 and 2 being undertaken in 2015, comprising 238 land plots. All 144 households who would be impacted by the loss of private land plots in Phase 1 and 2 were interviewed in a livelihood survey conducted in June-July 2014. While all of the households surveyed owned an agricultural plot that would be affected by the Project, the percentage of households stating that farming was their primary occupation was relatively low, at 9%. Most households base their livelihoods on a combination of activities, including farming and others, including salaried work (for those working in Gndevaz, mainly in public organisations such as education, health, municipal services, and for those working in Jermuk mainly private enterprises based there).

An additional 22 land plots (13 ha, with 17 known owners and three yet to be confirmed) will be affected by the conveyor (known as Phase 4 and requiring a 15m strip of land to be taken for life of the mine and subsequently restored and handed back to landowners). Phase 3 will affect 15 land plots, over 15.7 ha, affecting 7 landowners. Land acquisition for these phases will be undertaken during 2016.

The Project has been designed to minimise displacement where possible. While no houses are directly impacted by the footprint of the Project, an apartment building containing three apartments (one of which is inhabited) is located between the HLF and Gndevaz. This location has been identified as suitable for a primary monitoring station during the construction and operational phases of the Project. Discussions with the owners of the apartment building and

its resident have indicated a willingness to relocate to a different location. This is the only case of physical displacement anticipated from the Project. Adjacent to this apartment building is a recently established livestock and dairy farm. While in relative proximity to the HLF, this farm unit has no residential apartments or houses.

Duration of Impact

Some of the land required for the Project will be needed for the period of construction and mining only (approximately 12 years). This is particularly the case for the conveyor between the crusher and the HLF and the BRSF in the communities of Gndevaz and Saravan. Upon mine closure, any facilities on this land will be removed and the land will be re-contoured, restored and transferred to community ownership for communal use as pasture or forest land. Due to slope and safety issues, the mine pits will not be usable for grazing and will likely not be returned to community ownership.

Land Tenure Considerations

Most plots were inherited from the original owners to whom they were allocated at the time of land privatisation in Armenia (in the early 1990s). As a result they are currently held under co-ownership arrangements by successors to these original owners. All registered co-owners have been identified through the identification stages of the land acquisition process that are described in detail in the LALRP.

Vulnerable People

Vulnerable people are people who by virtue of gender, ethnicity, age, physical or mental disability, economic disadvantage, or social status, may be more adversely affected by the land acquisition process than others and who may be limited in their ability to claim or take advantage of compensation. In the context of the Amulsar Project, potentially vulnerable people include: disabled persons (mental or physical); seriously ill persons; the elderly (particularly when they live alone); households who heads are female and who live with limited resources; households who have no or very limited resources; and widows and orphans. Based on the livelihood survey of Gndevaz landowners and land users, affected people have been pre-screened for potential vulnerability as follows:

- There are 15 female headed households (11.7%). Most of these are one-person households (typically an elderly widow). These households are pre-identified as potentially vulnerable;
- 22 household heads are 65 years of age or over, and are also pre-screened as

potentially vulnerable;

- 1 household is categorised as “very poor and unable to cope with their basic needs”
- There are 32 invalids (either people registered as invalids 1st to 3rd categories per Armenian law, or people declared as chronically and seriously ill in the survey) amongst the affected households;
- All together, and taking account of overlaps between the categories, 27 households are pre-identified as potentially vulnerable.

Taking all these factors into consideration, the land acquisition process has the potential to affect the livelihoods of land owners and land users (typically one of the co-owners in most cases or one distinct land user). This is considered to be a localised negative impact, occurring in the medium-long term, with a high impact level. A second impact relates to the physical displacement of a resident in an apartment building in proximity to the HLF. This is considered a localised negative impact, occurring in the long-term, with a high impact level.

Mitigation of Economic Displacement Impacts on Land Users and Land Owners

The Project is implementing all land acquisition activities in conformance with IFC PS 5 and EBRD PR 5, in addition to Armenian law. The Project strategy for land access is defined within the Land Access and Livelihood Restoration Plan (LALRP) and its Addendum, see Appendix 8.23 and is based upon the following principles:

- Physical displacement is minimised (Project facilities avoid all residential areas and only one resident will have to move as a result of the Project);
- Land access is based upon negotiated settlements in the sense of PS5 and PR5; expropriation is used only as a last resort if all avenues to reach a reasonable amicable settlement have been exhausted;
- Any compensation is at replacement value;
- A land for land option is available to those willing to choose replacement land rather than cash compensation;
- Identification of affected plots and affected people is based on cadastral information, complemented and ground-truthed if claims arise;
- Impacts to livelihoods are assessed and mitigated where needed;
- Wherever legally, technically and economically possible, land used for the Project is returned to its previous physical condition and ownership after use for mine construction and operations;
- A grievance mechanism is in place;

- Affected people are informed and consulted with; and
- Vulnerable individuals are identified and assisted where needed.

The process of land acquisition includes the following five steps:

1. Identification of affected land plots, landowners and land users, including informal land users, based on cadastral information and title search and gathering of all legal documentation (land titles, leases, mortgages, liens, certificates of death and wills to determine inheritance, powers of attorney);
2. Socio-economic survey of affected landowners and land users;
3. Inventory of assets on the affected plots, including structures, trees and crops;
4. Compensation offer to the affected landowner (including land for land option), and land user if applicable, consultation process and signature of a Preliminary Agreement (option agreement); and
5. Finalisation of the transaction (sale-purchase agreement) and transfer of the land plot to Lydian's property.

Cadastral information for affected land plots was obtained in 2014 and 2015 from the relevant institution based on the Project footprint, per step 1 above. This information includes the identity of the owner (or co-owners) and data pertaining to the categorisation of the land (arable or not, irrigated or not) in view of the determination of the cadastral value for taxation purposes.

The socio-economic survey referenced in step 2 above was undertaken between June and July 2014, covering 128 affected households, and extended in November 2015 to capture households affected by later phases of land acquisition. The purpose of the survey was to establish the socio-economic circumstances of every affected household, in line with international requirements. An inventory of crops, trees, and structures was carried out at the same time, creating a cut-off date for each phase of land acquisition.

A three visit process is being used to undertake the negotiation and reach an agreement with each household based on standard legal agreements. In cases where the landowner does not use the land and there is a distinct land user, land compensation will be offered to the landowner, while crop and tree compensation will be offered to the land user. This also applies to land users farming on municipal land. It is understood from preliminary interaction with the communities that there is a preference towards cash compensation rather than in-

kind (land for land. The Project will accommodate such requests by providing irrigated replacement land of similar agronomic potential, with details presented in the LALRP.

All land to be acquired for the Project is agricultural land (there is no industrial or residential land).

Compensation rates were calculated by Armenian professional valuers in compliance with Armenian law and reviewed by an international resettlement specialist to meet international requirements. The details of the valuation methodology (land, crops and trees, buildings etc.) are included in the LALRP and its Addendum and will be disclosed to affected parties as part of the proposed compensation agreements. Valuation of each land plot is done by the “comparative method”, whereby relevant transactions are identified in the area based on official information, with a top-up to meet rates observed in Armenia on other international projects.

Annual crops (wheat, barley, potato, maize, garden crops, etc.) are valued based on observations of the crop density and condition in each plot when the inventories were conducted. Market prices were gathered based on official Armenian statistics complemented by observations at local markets. Apricot and other fruit trees were valued to compensate for the loss of income incurred by the land user or land owner. Trees were categorised by variety and age, with a value for each category of age, based on the average productivity of the tree and the average market price of the produce.

Lydian will seek to ensure that no vulnerable people are disproportionately affected by the land acquisition process. The following activities will be implemented in cooperation with local authorities in respect of vulnerable people affected by the Amulsar Project:

- Assistance during the land acquisition and negotiation process, including, at the stage of plot and landowner identification, specific individual meetings to explain eligibility criteria and entitlements, clauses in compensation agreements, grievance avenues etc.;
- Assistance in the payment process (provision of transport to the bank effecting compensation payment, support in the payment procedure, money management awareness etc.); and
- Prioritization for training courses to enhance employability and prioritization for employment by contractors where possible and subject to contractors’ operational

needs.

The implementation schedule of the land acquisition process itself, as well as the monitoring and evaluation requirements are defined in the LALRP and its Addendum.

All people affected by the land acquisition process will have access to the Lydian grievance mechanism, whereby:

- All grievances are registered, reviewed and responded to. Grievance coordinators will acknowledge receipt of a grievance within 7 days of receipt and will respond within 30 days of receipt;
- The grievance management mechanism includes amicable grievance review and resolution;
- In cases where the aggrieved individual or group is not satisfied with the outcome proposed by the amicable mechanism, they are able to resort to Justice at any stage in the resolution process.

The household requiring physical relocation will be compensated for the value of their lost assets, and assistance will be provided to relocate to a new location of their choosing.

Residual Economic Displacement Impacts to Land Owners and Land Users

The mitigation measures outlined above, including the availability of a land for land option, are expected to minimise the impact of economic displacement experienced by land users and land owners in Gndevaz and Saravan communities. Where land needs to be acquired permanently it will be purchased through a negotiated settlement and compensation for loss of land, crops, trees and buildings will be paid at replacement value. Monitoring and evaluation will be conducted to assess residual impacts and implement additional livelihood restoration measures if monitoring indicates that such are necessary.

Based upon the successful implementation of the mitigation measures outlined above, the residual negative economic displacement impact is expected to be medium-long term, moderate and with localised focus (Table 6.16.1), and the residual physical displacement impact is expected to be a long-term moderate and localised.

Sub-category	Direction	Magnitude	Extent	Duration	Impact (prior)	Impact (post)
Economic displacement of land users and land owners	Negative	High	Local	Medium – Long term	Major	Moderate
Physical displacement of household	Negative	High	Local	Long-term	Major	Moderate

6.16.2 Economic Displacement of Herders

Project Activities Affecting Economic Displacement of Herders

In the Project area, most herders use rented community land held by the respective municipalities, in practice mostly the municipality of Gorayk.

The Project footprint will cover 599 hectares, with a total of 922 hectares of land being disturbed (this total includes the Project footprint). A further 477 hectares will have restricted access (including areas restricted by fence lines, operational safety requirements (e.g. blasting zones) and areas where wildlife will be unable to pass through), resulting in a total land disturbance and a restricted access zone of 1399 hectares. Some of this area is used by seasonal and local resident herders to graze animals and grow hay during the summer months. The restricted access areas are shown in Figure 4.1.6 and the fencing that restricts access is shown on Figure 3.24. Regardless of Project impacts, access to these areas is limited at present due to the limited presence of roads to the west of Amulsar Mountain.

Potential Economic Displacement Impacts to Herders

There are two main categories of economic displacement impacts for seasonal and resident herders, which could be generated by the Project:

- Loss of access to land which is used by herders at present for grazing and hay, with resultant economic displacement; and
- Loss of access to temporary structures that herders use as temporary camps during the summer months while they are in summer pastures.

A census of the seasonal herders was undertaken in August and September 2012 by WAI and Geoteam staff and results from this census are briefly described here. This was complemented by focus group discussions held in the summer of 2014 and a further survey

of herders conducted by Geoteam in September 2015. As herders are mobile, a composite of the herder locations identified across each of these surveys and focus group discussions is illustrated in Figure 4.12.3.

Fifty-eight seasonal herders migrated to the broader area in 2012 (believed to be a typical year). Thirty seasonal herders were identified in September 2015 as using land in areas which are likely to be affected by the Project. These herders primarily use land to the east of the BRSF. Daily herders will also be impacted by the Project. Daily herding activities undertaken by the residents of Gndevaz using lands near the HLF and conveyor are likely to be impacted by Project land take and restriction of access. Nine daily herders were interviewed; however, this is only a representative sample of affected daily herders from Gndevaz. Table 6.16.2 summarises the Project footprint areas which will affect seasonal herders.

Table 6.16.2: Herders Affected by Project		
Herder Locations	Herder Use	Affected or Not-Affected
HLF and conveyor area used by daily herders from Gndevaz	Nine herders interviewed, representing all herders living in Gndevaz who use the HLF and conveyor area for daily herding activities. 1100 sheep, 430 goats, 650 cattle, donkeys, and horses. Gndevaz herders take their cattle to pastures daily, and when land dries out during summer they use lands at higher altitudes. Herders operate on a rotational basis, with alternative sources of income, using income from herding to supplement other income. Two professional herders are known to operate in Gndevaz.	Potentially Affected
BRSF	Thirty seasonal herders surveyed who have camps in and near the BRSF footprint and who use the area to graze cattle (all originate from the village of Xndzoresk). They bring approximately 1420 animals to this area each year (920 cattle, 470 sheep and goats, 30 horses and donkeys). They stay in tented camps for the duration of the herding season (April – September or later depending on the weather). Animals use wider area for grazing, milk collection	Potentially Affected

Table 6.16.2: Herders Affected by Project		
Herder Locations	Herder Use	Affected or Not-Affected
	occurs twice daily through milk collection trucks. This area provides high altitude alpine fields which herders have been using for many years. These herders travel between 80-100 km from their home to use this land each summer. See Figure 6.16.2.	
Ughedzor	All residents interviewed, none use the restricted area for grazing	Not affected



Figure 6.16.2: Seasonal Herders from Xndzoresk (based to the east of the BRSF), July 2014

The scale of the displacement impact caused by the Project depends on the availability of alternative pasture and hay of equivalent quality and the inconvenience caused to the herders by restricting their access to pasture and hay land. Land of equivalent quality must be of a similar agronomic potential, have similar access to infrastructure and services used by the herders, including roads and tracks (used for the sale of dairy products), water sources and structures available for use for camps. Focus group discussions with herders conducted in July 2014 highlighted the range of livelihood activities undertaken by seasonal herders while they are in the area. For example, the herders originating from Xndzoresk reported the following productivity and income:

- Up to 30-40 kilos of cheese are produced in the camp during the summer season;
- Up to 6 trucks collect milk from the herders daily (morning and evening), yielding 140 AMD per litre of milk sold.

Availability of Land

Herders rent land from the community administrators, with most of the potentially affected seasonal herding activities taking place on land administered by Gorayk. Lease agreements are typically formalised between the local authority and the herder, and a minimal rental fee is paid into the community budget. Local Mayors of Gorayk, Saravan and Gndevaz report having sufficient additional similar pasture and hay land available for rent which could be used by herders when the Project restricts access to the land they are currently using. The census work identified that access to land and water and proximity to any existing milk collection services and herders permanent houses were the key considerations for herders.

A visual land capability assessment conducted by WAI indicated that some of the land being used for grazing purposes at present is over-grazed. This is supported by feedback from herders during the census. The quality of the land which will be lost is discussed in greater detail in Section 6.15.

Inconvenience

During the 2012 census, herders indicated a preference to stay in the same area if the option was available, but in the absence of that option, only minimal inconvenience was anticipated if a move was required as similar land is available. In September 2015, 75% of the impacted seasonal herders indicated their willingness to relocate to new lands so long as water sources and access to the land were equivalent to the land they were vacating. Importantly, during the focus group discussions held in July 2014, the herders who originate from Xndzoresk (and

are based to the east of the BRSF during summer months) indicated it takes three days for them to move their cattle from their village to this area at the beginning of summer (May each year). If the mine were to require this land, the herders indicated that they would like to move to land closer to home, using pasture areas in mountains that they consider to be “idling” in proximity to their village. They have been using the Vorotan valley for generations because the Vorotan stays green longer than other areas in south-eastern Armenia.

For those herders who have formal agreements with the community administrators (mainly Gorayk) entitling them to rent the land, the formalisation of a new agreement for use of a different area is not anticipated to cause significant inconvenience. Also, a small proportion of herders use the land in the Project area without a rental agreement or payment of fees to the community administrators. In this context, they are more vulnerable to a change in circumstances. These herders reported that the primary reason for non-payment of access fees for land by this group is that they cannot afford it, hence they may be more vulnerable to this change in circumstances. The Company will monitor herders to check that all herders visited in 2012, including those without a lease, have been able to identify and exploit new pasture areas with minimal inconvenience, whether under a formal or informal arrangement.

Infrastructure and Services

There are no permanent residential structures constructed or used by herders as camps, however, the 2012 census identified nine herders within the broader area who use ruins, semi-completed buildings and abandoned structures to support their camps. None of these structures are expected to be impacted by the Project. A proportion of the herder camps are mobile and use portable tents, so can be moved to a new location with comparable ease.

No services are provided to the herder camps (i.e. no electricity, sewerage, waste collection, water distribution etc.)

Mitigation of Economic Displacement Impacts on Herders

Potential livelihood impacts to herders will be mitigated through a variety of measures, based upon the nature of the impact experienced. The most important mitigation measure is Project design, whereby areas important to herders (for access, water supplies, pasture, accommodation or holding other values) have been avoided. This is evident in the Project footprint when overlain with the location of herding activities (as seen in Figure 4.12.3). It is expected that 30 seasonal herders will be impacted by the Project, requiring relocation to

alternate lands. Seasonal herders will be relocated to lands owned by Gorayk to the east of the Vorotan River.

Impacts are also expected for daily herders living in Gndevaz. Daily herders will be affected at a lower level than seasonal herders, with impacts to their activities primarily connected to a restriction of access due to the linear conveyor feature. To manage this impact, the Project will install a number of conveyor crossings, allowing herders, their animals and equipment to cross the conveyor. The location of crossings will be determined through discussion between biodiversity specialists, design engineers and community administrators.

In addition, the following mitigation measures will be put in place:

- The Project will notify herders well in advance of its land needs (three months as a general rule), such that they are given sufficient notice to be able to take steps to move to alternative pasture;
- The Project will support herders to engage with community administrators to identify new equivalent lands available for rental, and monitor that access to similar land is actually achieved as of the summer of 2015 when construction starts;
- If immovable structures are lost (e.g. buildings used as part of the pasture camps) and the herders can ascertain ownership or usufruct (even informal), the Project will provide compensation for the shelters, as monetary compensation following consultation with the affected herders. Herders will also be eligible for a one-off compensation for disruption to their activities if they are required to relocate. In the event that the new herding lands do not have access to sufficient spring catchments, the Project will support the establishment of new water sources for herders;
- Herders who currently lack formal rights to the land which they have been using will be supported by Lydian in gaining access to the new land parcels;
- Lydian will monitor the livelihood impacts of these changes upon the herder communities by conducting for three years an annual survey with clearly established indicators to evaluate material changes in livelihoods against the 2012 baseline; and
- Opportunities to support animal husbandry improvements in the region through technical assistance enhancing milk and meat production and marketing will be reviewed in collaboration with herders. This could include improved refrigeration and collection of milk, artificial insemination and associated introduction of new genetic stock. A test animal husbandry programme has already been implemented that will be expanded based on lessons learned in the pilot phase. Details are available in the

LALRP.

In addition to the impact mitigation activities outlined above, the broader group of seasonal herders will be a target group for the technical assistance programme described in Chapter 6.13. Technical assistance will focus on increasing agricultural output and diversification of economic activities will be prioritised.

The rehabilitation plans described as part of the mine closure plan will minimise these impacts in the long-term, however some land will be affected permanently (pMRCRP, see Appendix 8.18). The HLF and open pits (Erato, Tigranes and Artavazdes), even once rehabilitated, will have a modified land capacity which will not support herding activities.

Residual Economic Displacement Impacts to Herders

Economic displacement has been avoided wherever possible in the Project design, as can be seen in the Project footprint. Some displacement of herders may still occur as a result of the Project footprint, and changes to herding locations may present some challenges. The mitigations described above, as well as the commitment to monitor any unforeseen changes through annual surveys, would make the residual impact Minor (negative).

Sub-category	Direction	Magnitude	Extent	Duration	Impact (prior)	Impact (post)
Economic Displacement of Herders	Negative	High	Local	Medium term	Major (negative)	Moderate (negative)

Table 6.16.4 summarises Project impacts on livelihoods.

Sub-category	Direction	Magnitude	Extent	Duration	Impact (prior)	Impact (post)
Economic displacement of land users and land owners	Negative	High	Local	Medium – Long term	Major	Moderate
Physical displacement of household	Negative	High	Local	Long-term	Major	Moderate
Economic Displacement of Herders	Negative	High	Local	Medium term	Major	Moderate

6.15.1 Monitoring and Audit

As described above, mitigation measures that relate to managing impacts of the Project on livelihoods will be addressed in a number of management plans. Table 6.16.5 outlines monitoring indicators which will be used and developed further to assess the effectiveness of mitigation measures.

Table 6.16.5: Monitoring Indicators and Impact Mitigations

Section	Mitigation	Monitoring Indicator	Management Plan
<p>6.16.1 Economic displacement of land users and land owners</p>	<p>Land access principles clearly defined:</p> <ul style="list-style-type: none"> • Physical displacement is avoided (Project facilities avoid all residential areas and nobody will have to move as a result of the Project) • Land access is based upon negotiated settlements in the sense of PS5 and PR5; expropriation is used only as a last resort if all avenues to reach a reasonable amicable settlement have been exhausted; • Any compensation is at replacement value • A land for land option is available to those willing to choose replacement land rather than cash compensation • Identification of affected plots and affected people is based on cadastral information, complemented and ground-truthed if claims arise; • Impacts to livelihoods are assessed and mitigated where needed; • Wherever legally, technically and economically possible, land used for the Project is returned to its previous physical condition and ownership after use for mine construction and operations; • A grievance mechanism is in place; • Affected people are informed and consulted with; and • Vulnerable individuals are identified and assisted where needed. 	<ul style="list-style-type: none"> • Compensation payments tracked and reported on to management at regular intervals • Number of sale agreements tracked • Total amount of compensation paid (cumulative) is tracked • Grievance mechanism reports • Livelihood assessments conducted regularly on sample of affected people 	<p>Land access and livelihood restoration plan (Appendix 8.23)</p>
<p>6.16.1 Economic displacement of land users and land owners</p>	<p>The following activities will be implemented in cooperation with local authorities in respect of vulnerable people affected by the Amulsar project:</p> <ul style="list-style-type: none"> • Assistance during the land acquisition and negotiation process, including, at the stage of plot and landowner identification, specific individual meetings to explain eligibility criteria and entitlements, clauses in compensation agreements, grievance avenues etc.; • Insistence on the land replacement option where it is obvious that 	<ul style="list-style-type: none"> • Livelihoods assessments conducted regularly with vulnerable households • Grievance mechanism reports 	<p>Land Access and Livelihood Restoration Plan (Appendix 8.23)</p>

Table 6.16.5: Monitoring Indicators and Impact Mitigations

Section	Mitigation	Monitoring Indicator	Management Plan
	<p>the affected land is critical to the household’s livelihood;</p> <ul style="list-style-type: none"> • Assistance in the payment process (provision of transport to the bank effecting compensation payment, support in the payment procedure, money management awareness etc.); • Prioritization for training courses to enhance employability and prioritization for employment by contractors where possible and subject to contractors’ operational needs. 		
<p>6.16.1 Physical displacement of household</p>	<p>The household requiring physical relocation will be compensated for the value of their lost assets, and assistance will be provided to relocate to a new location of their choosing.</p>	<ul style="list-style-type: none"> • Follow-up assessments of individual being resettled 	<p>Land Access and Livelihood Restoration Plan and Addendum (Appendix 8.23)</p>
<p>6.16.2 Economic displacement of herders</p>	<p>Impacted seasonal herders will be relocated to lands owned by Gorayk to the east of the Vorotan River.</p> <p>To manage the impact to daily herders from Gndevaz, the Project will install a number of conveyor crossings, allowing herders, their animals and equipment to cross the conveyor.</p> <p>For herders who lose access to pasture lands:</p> <ul style="list-style-type: none"> • Lydian will support herders to engage with community administrators to identify new equivalent lands available for rental; • If structures are lost (e.g. buildings used as part of the pasture camps), and herders can ascertain ownership, Lydian will provide replacement structures or means to construct replacement shelters following consultation with the affected herders and herders will be eligible for a one-off compensation payment for disruption caused to their 	<ul style="list-style-type: none"> • New herder census to update all people using land; • Minutes of engagement with community administrators complete; • Report on structures replaced complete; • Number of herders with no formal rights to land use; • Census of new lands made available for herders who previously had no legal rights; • Annual socio-economic survey with herders; and • Assessment of technical assistance for animal husbandry complete. 	<p>Land Access and Livelihood Restoration Plan, Environmental and Social Management Plan (Appendix 8.23 and Chapter 8)</p>

Table 6.16.5: Monitoring Indicators and Impact Mitigations

Section	Mitigation	Monitoring Indicator	Management Plan
	<p>activities;</p> <ul style="list-style-type: none"> • In the event that the new herding lands do not have access to sufficient spring catchments, the Project will support the establishment of new water sources for herders; • Herders who lack formal or informal rights to the land which they have been using will be supported in gaining access to new land; • Lydian will work with community administrators to monitor the livelihood impacts of these changes upon the herder communities by conducting an annual survey about material changes; • Opportunities to enhance milk and meat production of animals through improving animal husbandry practices will be reviewed in collaboration with herders; and • Monitoring systems will be established to assess the livelihoods of displaced herders and to ensure efforts are launched to address issues before they negatively impact on the herders. 		
<p>6.16.2 Economic displacement of herders</p>	<p>In addition to the impact mitigation activities outlined above, the broader group of seasonal herders will be a target group for the technical assistance programme described above in relation to the mitigation of impacts on non-industrial livelihoods and economics. Technical assistance will focus on increasing agricultural output and diversification of economic activities will be prioritised.</p>	<ul style="list-style-type: none"> • Community development expenditure • Input – outcome evaluation for technical assistance programmes 	<p>Land Access and Livelihood Restoration Plan, Stakeholder Engagement Plan, Community Development Plan (Appendix 8.23, Appendix 8.6 and Appendix 8.16)</p>

6.16.3 Conclusions

The impact assessment has been carried out to assess the effects of construction, operation and closure of the mine on livelihoods both within and surrounding the direct Project footprint. Findings are summarised below:

- Impacts fall into two main categories: economic and physical displacement of land users and land owners, and economic displacement of herders;
- The LALRP has been developed to mitigate and compensate impacts associated with the economic and physical displacement of land users, owners and herders. Effective implementation of mitigation measures including: avoidance of displacement; compensation at replacement value of all affected assets; a process based on negotiated settlements; providing a viable land for land compensation option to those willing to select such rather than monetary compensation; ensuring vulnerable households are not disproportionately affected by the land access process; assisting herders in securing access to alternative pasture; and providing technical assistance for animal husbandry and crop cultivation will reduce economic displacement impacts to moderate for land owners and users and moderate negative for herders.