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4.17 Livelihood Activities and Employment Opportunities

The focus of the United Nations Human Development Report for 2015 is on the role of work in development. To support this focus, indicators related to work in Armenia have been reported in the country briefing note for Armenia¹, and are summarised in Table 4.17.1. The data demonstrates the importance of agriculture within Armenian employment, and also highlights a high level of youth unemployment comparative to other countries.

Work Indicators	Armenia	High HDI	Europe and Central Asia
Labour force participation rate (% ages 15 yrs and older)	63.4	67.1	57.2
<i>Female</i>	54.2	57	45.6
<i>Male</i>	72.6	77.2	70.0
Share of employment in agriculture (% total employment)	38.9	28.8	24.5
Share of employment in services (% total employment)	44.4	43.8	52.5
Labour force with tertiary education (%)	22.9	-	-
Total unemployment (% of labour force)	18.4	4.7	9.9
Long term unemployment (% of labour force)	9.7	-	-
Youth unemployment (% of of youth labour force)	36.0	16.7	19.5
Working poor, PPP \$2 per day (% of total employment)	12.2	14.7	3.8

An Integrated Living Conditions Survey (ILCS)² was conducted across all *marzer*, across a 12 month period, in 2009. The results of this survey inform the following summary of livelihood activities in Armenia.

The *de facto* labour resource population (aged 15-75 years of age) of Armenia was 2.4 million in 2009, which comprised approximately 77% of the total population. Of this group, men comprised 45% and women 55%, with 66% resident in urban areas and 34% resident in the rural landscape. Within this labour resource, a labour participation rate of 59% was recorded (69% for men, and 51% for women). Unemployment was recorded at 18.7% in 2009, with no significant bias by gender, and this rate had only reduced slightly (to 18.4%) in 2014.

¹ UNDP. Human Development Report 2015, Work for human development – briefing note for countries on the 2015 Human Development Report - Armenia. New York, USA. 2015

² ILCS data is reported within ADB (2011) The Informal Sector and Informal Sector Employment in Armenia, Country Report 2010, ADB

The vast majority of Armenians (approximately 97%) have only one job, with a significant proportion of these roles being considered “informal” (52.1%). Most agricultural activity in Armenia is considered informal under the International Labour Organisation’s classifications. Therefore, it is unsurprising to find that the majority of informal employment (82%) is located in rural areas.

In addition to employment opportunities, remittances play an important role in household incomes, with remittances averaging 16 % of GDP between 2004 and 2009 with up to 20% of households receiving remittances of some form³.

4.17.1 National Structure of Employment and Labour

In Armenia, the highest share of employment is recorded in the agricultural sector followed by industry, education and wholesale and retail trade (as indicated in Figure 4.17.1 and Figure 4.17.2).

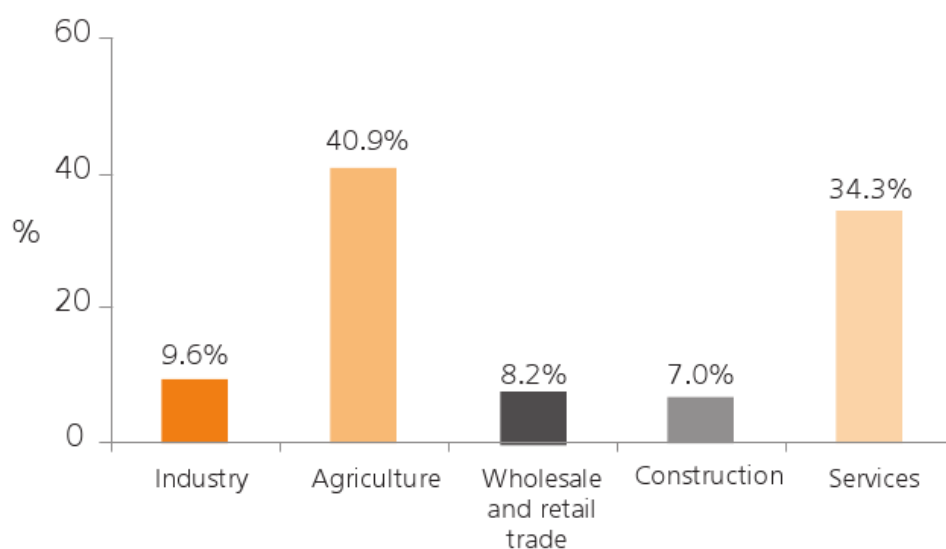


Figure 4.17.1: Employment by Industry⁴

³ International Monetary Fund (2012), www.imf.org/external/country/arm/rr/2012/062012.pdf

⁴ ADB, (2011) The Informal Sector and Informal Sector Employment in Armenia, Country Report 2010, ADB

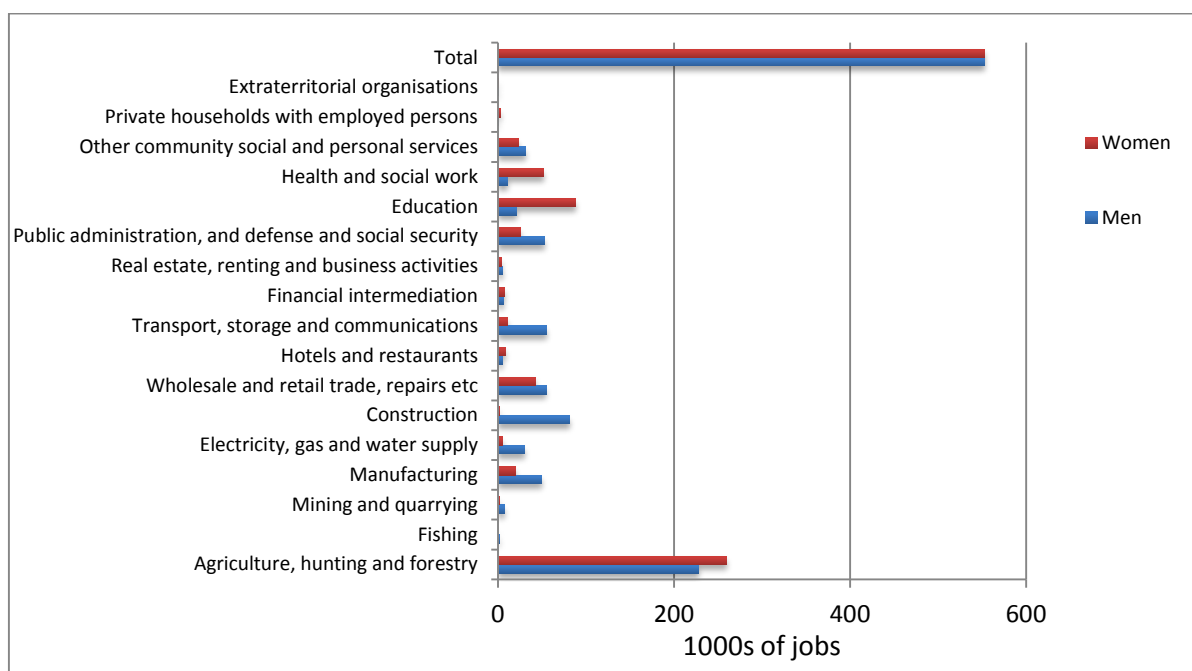


Figure 4.17.2: Employment by Sector⁵

Figure 4.17.2 highlights a bias towards roles which are traditionally considered feminine by women in Armenia (agriculture, education, health, and retail). A more detailed breakdown of employment by industry, location and sex is shown in Table 4.17.2.

Sector	Industry	Nature of Employment						Total Employment (1,000 jobs)		
		Formal			Informal			Men	Women	Total
		Men	Women	Total	Men	Women	Total			
A	Agriculture, hunting, and forestry	4.2	2.7	6.9	223.7	257.2	480.8	227.8	259.9	487.7
B	Fishing	0.1	0.0	0.2	0.1	0.0	0.1	0.2	0.0	0.2
C	Mining and Quarrying	7.4	2.1	9.5	0.1	0.0	0.1	7.5	2.1	9.7
D	Manufacturing	41.5	13.2	45.6	8.5	7.3	15.8	50.0	20.4	70.4
E	Electricity, gas, and water supply	29.5	4.7	34.2	0.4	0.3	0.7	29.8	5.0	34.9
F	Construction	33.6	1.2	34.8	47.6	0.5	48.1	81.2	1.7	82.9
G	Wholesale and retail trade, repairs, etc.	33.3	26.7	60.0	21.4	16.5	37.9	54.7	43.1	97.8

⁵ ibid

⁶ Ibid. 1

Sector	Industry	Nature of Employment						Total Employment (1,000 jobs)		
		Formal			Informal			Men	Women	Total
		Men	Women	Total	Men	Women	Total			
H	Hotels and restaurants	3.3	4.7	8.0	1.5	3.6	5.0	4.8	8.2	13.1
I	Transport, storage, and communication	41.5	9.8	51.3	13.5	0.6	14.1	55.0	10.5	65.4
J	Financial intermediation	6.2	6.9	13.1	...	...	...	6.2	6.9	13.1
K	Real estate, renting, and business activities	4.4	3.7	8.1	0.6	0.2	0.8	5.0	3.9	8.9
L	Public administration and defense, social security	52.5	25.0	77.5	...	...	...	52.5	25.0	77.5
M	Education	20.7	86.5	107.2	0.2	1.1	1.3	20.9	87.6	108.5
N	Health and social work	10.4	51.2	61.6	0.1	0.2	0.2	10.5	51.4	61.8
O	Other community social, and personal services	23.0	17.8	40.8	7.8	5.0	12.9	30.8	22.9	53.7
P	Private households with employed persons	0.3	0.4	0.6	1.1	2.8	3.8	1.3	3.2	4.4
Q	Extraterritorial organisations	1.3	1.0	2.3	-	-	-	1.3	1.0	2.3
	Total	313.1	257.5	570.7	236.4	295.3	621.7	639.5	552.8	1,192.3

Notes:
... = no observation/no data available, - = not applicable

Agriculture, hunting and forestry account for 76% of employment in rural areas. In the study area, the importance of agriculture is even more pronounced, with 96% of all employment in Vayots Dzor *Marz* derived from agriculture. Agriculture is less important (43% of employment) in Syunik *Marz* as a whole, due to the influence of mining activities in the south.

Marz	Nature of Employment					
	Thousand			%		
	Formal	Informal	Total	Formal	Informal	Agriculture
Yerevan	273.8	65.5	339.2	80.7	19.3	2.0
Aragatsotn	17.0	49.0	66.0	25.7	74.3	65.4
Ararat	34.7	92.3	127.0	27.3	72.7	62.7
Armavir	28.3	85.6	113.9	24.8	75.2	64.1
Gegharkunik	27.2	66.1	93.3	29.1	70.9	65.4
Lori	42.9	64.2	107.1	40.1	59.9	51.3
Kotayk	46.8	53.2	100.0	46.8	53.2	39.9
Shirak	37.5	48.9	86.5	43.4	56.6	53.0
Syunik	33.9	33.7	67.6	50.1	49.9	42.9
Vayots Dzor	9.8	14.7	24.5	40.1	59.9	95.9
Tavush	18.9	48.4	67.2	28.1	71.9	59.5
Total	570.7	621.7	1,192.3	47.9	52.1	40.9%

The average monthly earnings in Armenia were estimated at AMD 66,511 in 2009 (USD 161), with significant variation seen between male and female salaries (men earned on average 53% more than women). There was also a distinct variation between salaries paid in Yerevan and urban areas more generally and those salaries received in rural areas, with average rural salaries only reaching approximately 60% of the average Yerevan salary, as indicated in Table 4.17.4.

Employment Status	Average Earnings (AMD)		
	Yerevan	Urban	Rural
Employee	81,653	67,653	64,736
Employer	240,661	205,011	91,909
Own-account worker	93,421	43,681	41,345
Average Earnings	84,434	65,007	50,167

Salaries also vary widely across employment sectors, with mining and quarrying recording one of the higher average salaries as illustrated in Figure 4.17.3.

⁷ ibid. 1

⁸ ibid. 1

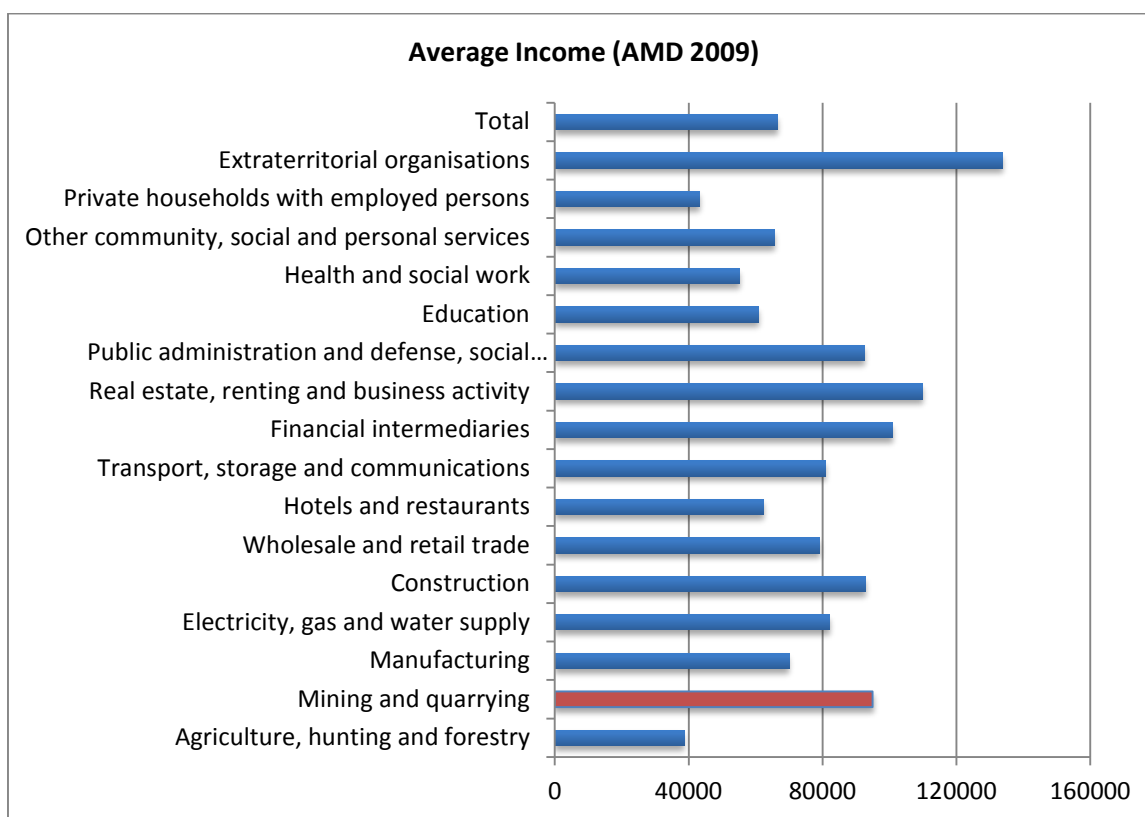


Figure 4.17.3: Average Earnings by Sector (AMD 2009)⁹

4.17.2 Livelihoods in the Study Area

Most households in Armenia derive income from a number of sources. Figure 4.17.4 summarises the findings of a national survey to identify income sources across each *Marz*. Vayots Dzor *Marz* and Syunik *Marz* both stand out for the absence of loans and debt as a source of income, and remittances also play a less important role in these *Marzes* compared to other areas. The public sector salaries are of significant importance in these *Marzes*, and even though agriculture is the dominant employer in the region, its contribution as a source of income is lower than would be expected.

⁹ *ibid.* 1

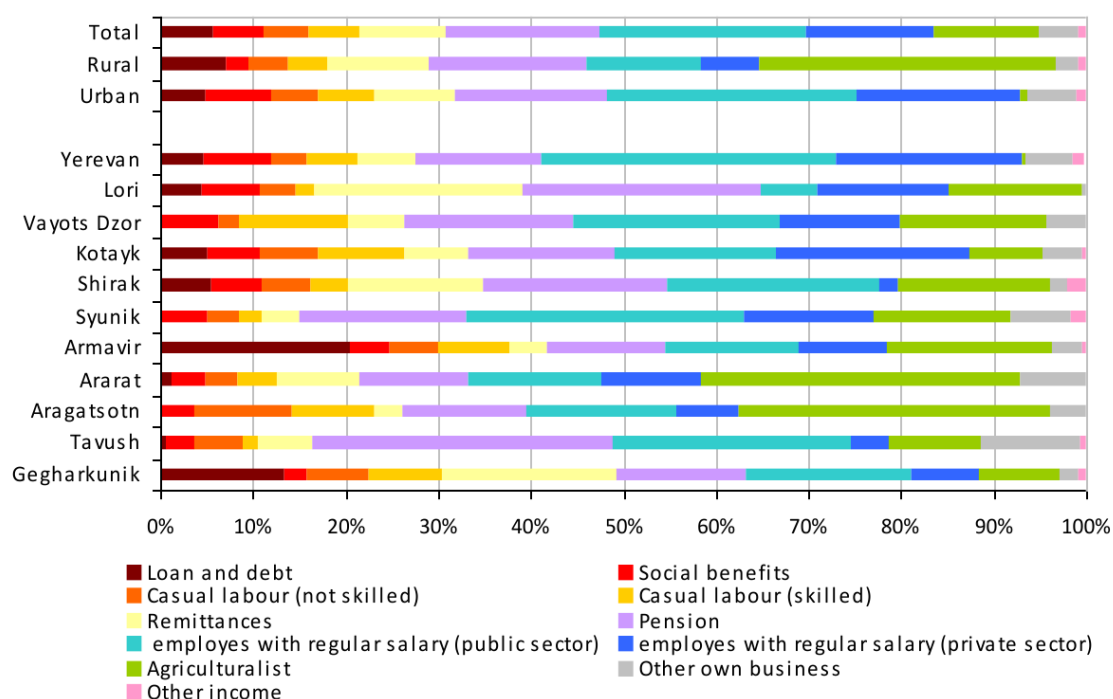


Figure 4.17.4: Livelihood by Marz¹⁰

Household surveys were completed by Armenian consultancy MPG in Gorayk, Gndevaz, Saravan, Kechut and Jermuk in 2010, and these surveys provide the source of much of the data presented in this chapter. In addition to these surveys, each village prepares a “Village Passport” annually which captures basic statistics about the village. This data is collected from the village Mayors by Lydian and used where relevant and when the data is considered robust.

Livelihoods in the rural communities of Gndevaz, Gorayk and Saravan¹¹ are dominated by agriculture, as can be seen in Figure 4.17.5. Many people reported receiving income from a number of the highlighted sources, rather than being dependent on a single income stream. In Jermuk and Kechut, the importance of full-time employment is evident in Figure 4.17.6.

While remittances are important at a national level, their role in the economy of the study area appears limited.

¹⁰ National Institute of Labour and Social Research, (2010), Impact of the Global Financial Crisis on Households, Yerevan

¹¹ MPG, (2010), Gorayk, Gndevaz and Saravan Baseline Study

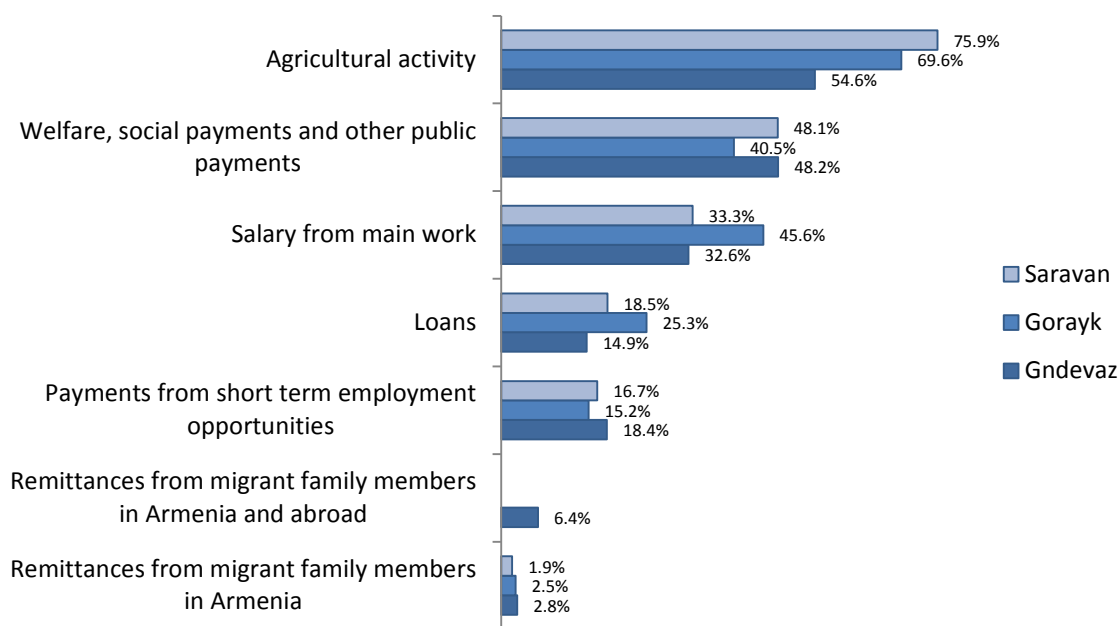


Figure 4.17.5: Sources of Livelihood in the Rural Communities (2010)¹²

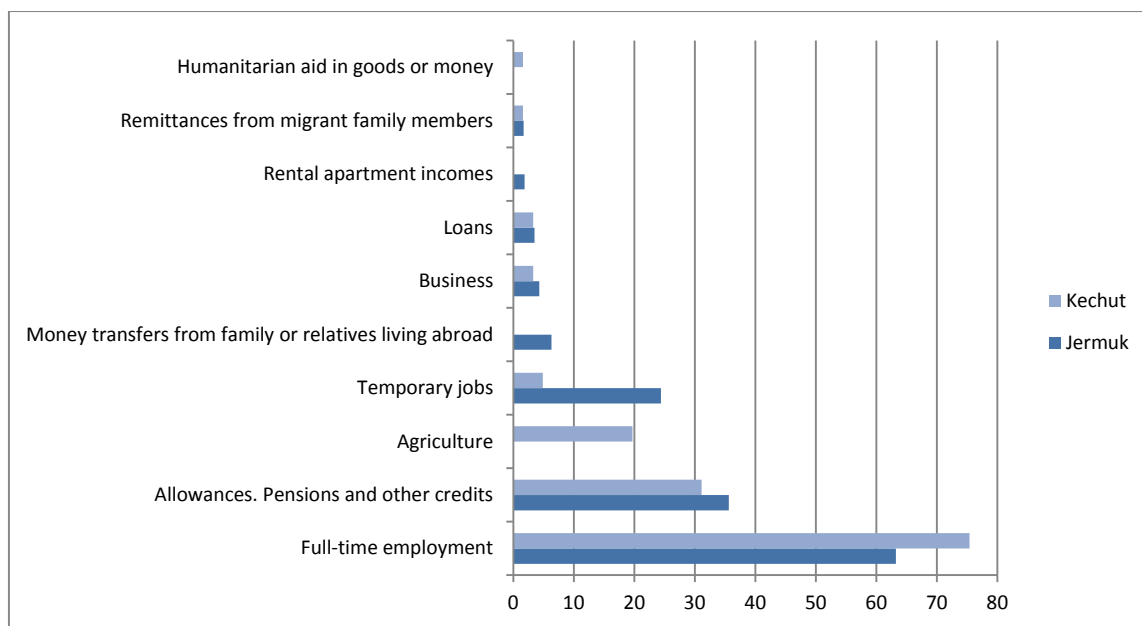


Figure 4.17.6: Sources of Livelihood in Jermuk and Kechut (2010)¹³

Key informant interviews conducted with the Mayors of each of the villages in 2014 again highlighted the importance of agriculture within each of these communities (as seen in Figure 4.17.7), with the villages having a far greater reliance upon agriculture than Jermuk.

¹² ibid. 10, p 4.17.7

¹³ MPG, (2010), Jermuk and Kechut Baseline Study

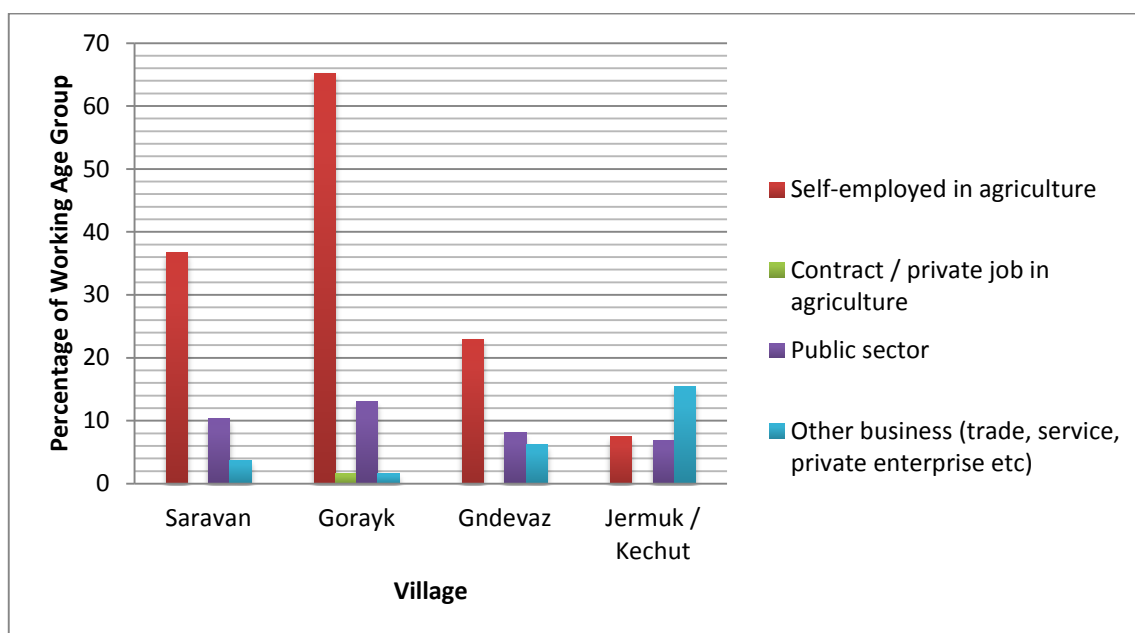


Figure 4.17.7 Employment breakdown reported by village Mayors (2014)¹⁴

4.17.3 Mining Industry

Southern Syunik *Marz* is the centre of mining activity in Armenia at present. Despite its relative proximity to the study area (about 80-100 km) there were no reports of workers from the study area seeking employment in the mines bordering Iran. As at November 2014, within Armenia, Lydian employed 33 people as direct employees (23 men, and 10 women), with another 59 contractors (37 men and 22 women) from the local area working for the project. Lydian International had a total workforce of 99 at that time: 92 in Armenia (as described) and 7 (6 men and 1 woman) based internationally. Based on these figures, exactly one third of the Lydian workforce was female at the end of 2014.

4.17.4 Private Sector (non-mining)

Between 30 and 45% of income in the rural communities of Gndevaz, Gorayk and Saravan was attributed to salaried employment in 2010. This includes public and private sector employment, taking account of employment by Lydian (which would have been in the order of 50 people at the time of the survey). In contrast, full-time employment is the dominant source of livelihood in Jermuk and Kechut¹⁵ (comprising approximately 70% of income).

¹⁴ Key informant interviews conducted with village mayors in 2014.

¹⁵ *ibid.* 12

There are relatively few private sector opportunities available in the area, with the largest employers being:

- Jermuk Mineral Water Bottling Factory (employee figures vary seasonally, but are officially recorded as between 30 and 100);
- Mayr Gortsaran Bottling Factory (similarly, figures vary seasonally between 15 and 50);
- Gndevaz livestock farm (employs approximately 10 people);
- Ashtarak Kat Milk Company (Gorayk – employs nine people);
- Gas Station in Gorayk employing an estimated 6-12 people; and
- Jermuk Tourism – During summer, Jermuk population increases with increased levels of tourism, and approximately 450 summer jobs exist to support this tourist industry¹⁶. During winter a smaller number of jobs are also generated to support the small ski industry. Most of these jobs are taken up by the residents of Jermuk, Kechut and Gndevaz.

Historically, Kechut was the housing base for workers developing the Kechut reservoir.

4.17.5 Public Sector

As evidenced in Figure 4.17.5, public sector salaries are an important part of livelihoods at the Marz level. Data is not available to confirm this trend in the study area; however, it can be assumed that public sector salaries significantly contribute to the full-time employment statistics for all rural and urban communities in the study area. This employment would include administrative staff of the rural community, teachers, health employees and service providers (e.g. water and sanitation staff).

4.17.6 Agriculture

Agriculture is the cornerstone of rural livelihoods in Armenia and the study area is no different from the national norm. Agriculture is practiced by both family units and by individuals, working on either common or private land. Agriculture is the largest source of income for the rural communities of Gorayk, Gndevaz and Saravan (as shown in Figure 4.17.5). Agricultural incomes are broadly split between cultivation and animal husbandry.

¹⁶ USAID (2008) Comprehensive Development Plan: Jermuk as a Destination Spa & Winter Tourism Center
ZT520088
May 2016

4.17.7 Cultivation

Typically, family units cultivate a garden or piece of land they either own or rent within the rural community lands. Staple crops such as wheat, spelt and barely are commonly grown, as are potatoes (see Figure 4.17.8). Cultivation is undertaken primarily as a subsistence activity, with very little surplus sold for income. The exception to this is in Gndevaz, where apricots are grown commercially and approximately 18% of households participate in this activity.

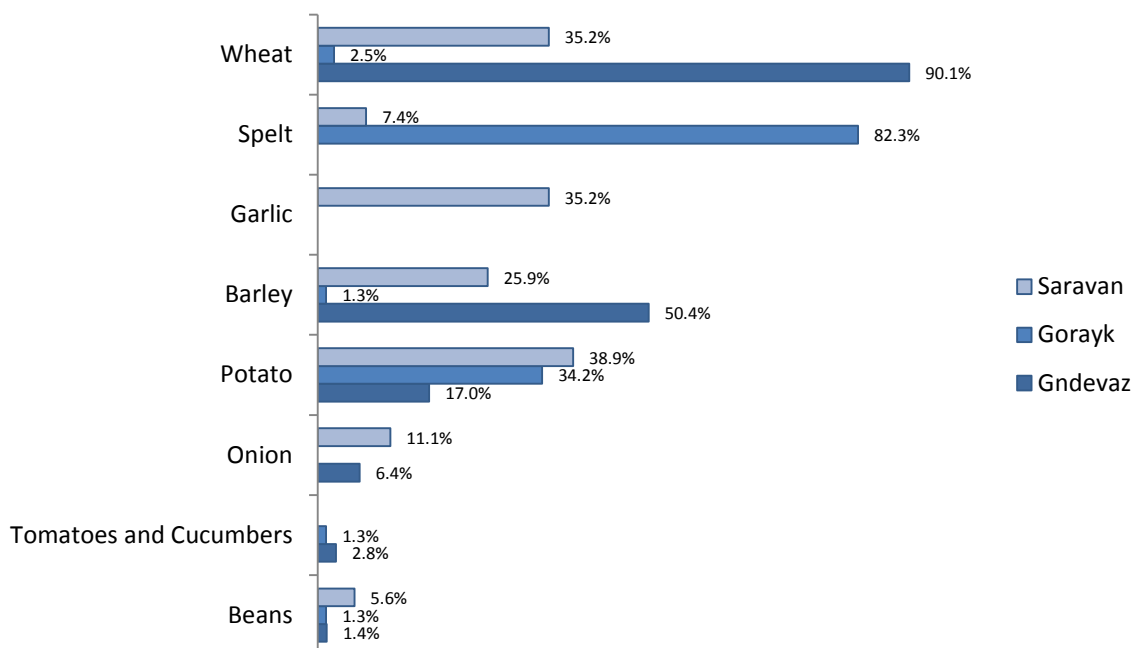


Figure 4.17.8: Crops Grown in the Rural Communities¹⁷

Residents in the rural communities in the study area typically maintain vegetable gardens close to their property where potatoes, tomatoes, cucumbers, beans, carrots onions and garlic are grown. Agriculture is important in Kechut also, although to a lesser extent. The dominant crop in Kechut is potato. Jermuk did not report agriculture as a source of income (see Figure 4.17.6).

Limited agricultural equipment is available to the rural communities to support their cultivation activities. Lydian International has been supporting an agricultural improvement project in the rural community of Gorayk, working with HDP, an NGO partner, since 2012.

¹⁷ *ibid.* 10
 ZT520088
 May 2016

In addition to cultivation, bee-keeping is also undertaken in the study area for household honey consumption.

Surveys conducted with community members as part of the 2010 households surveys (MPG)¹⁸ revealed the high cost of fertilisers, seeds and fuel was seen as the main reason for the poor profitability of fixed agriculture in the area, with the lack of a well-developed market for agricultural products as a close second. As the MPG household survey did not include specific questions on market access, quantitative figures on perceived market access are unavailable.

4.17.8 Animal Husbandry

The majority of households in the rural communities in the study area reported a high degree of reliance on animal husbandry as an income stream, with livestock ownership summarised in Table 4.17.5. With over three times as much agricultural land compared to the other rural communities, it is unsurprising that Gorayk has a much larger livestock quota. Animal husbandry is also practiced by residents of Kechut, but the village is less reliant upon it as a source of income.

Animals	Gorayk	Saravan	Gndevaz	Jermuk
Cows	653	180	507	630
Sheep and Goats	1048	350	1206	420
Donkeys	2	0	13	1
Horses	28	8	11	26
Poultry	1222	453	20000	760
Hares and rabbits	0	0	114	65
Bee hives	377	511	309	350
Pigs	22	31	290	110

Animal husbandry activities are typically undertaken by family units, with family members dividing essential tasks such as washing, feeding, milking, hay collection and grazing. Washing and milking are typically the domain of women, with men supervising grazing and other field activities. In some cases herders from the rural communities are hired by wealthier families in the same area to undertake their herding activities for them.

¹⁸ *ibid*

¹⁹ *ibid.* 10 & 12

Cattle in the study area are primarily raised for dairy production, with milk being sold to the Ashtarak Kat milk factory in Gorayk. Ashtarak Kat organises collection from Gorayk and Saravan and the surrounding area. The lack of a formal milk collection point is seen as a key limitation for residents of Kechut and Gndevaz. Additionally, the climate and topography of Gndevaz and Kechut are less favourable for animal husbandry.

A low volume of agricultural trade exists in the rural communities, with approximately 50% of survey respondents indicating they had either bought or sold agricultural products in the past year in 2009. Cows, poultry and sheep were traded in Gorayk, Saravan and Gndevaz, while Saravan respondents reported buying and selling pigs.

Rural Communities	Sold	Exchanged	Consumed
Saravan	68.5%	3.7%	57.4%
Gorayk	69.6%	36.7%	16.5%
Gndevaz	31.9%	3.5%	75.2%
Kechut	8.2%	11.5%	80.3%

* Note: these percentages indicate the proportion of positive responses to a question, with some respondents answering affirmatively for a number of options in response to a single question. As such, they should not be interpreted as relative proportions of an activity occurring.

Table 4.17.6 indicates the proportion of survey respondents who have traded agricultural items, for the period 2009 to 2010. The remoteness of all the settlements in the study area places local residents in a poor trading position, as merchants compensate for high transportation costs by driving the purchase point prices very low, resulting in low returns for producers in the area.

Barter is carried out unofficially between residents of the same village as well as between villages, for access to a greater variety of products; e.g. Gorayk and Gndevaz residents often exchange apricots for cheese.

Gorayk residents have access to two formal milk market routes – a local branch of Ashtarak Kat, a private milk collection and a distribution company active throughout Armenia, as well as a Sisian based enterprise, which operates a collection van in the area. Gorayk farmers produce cheese and yogurt mainly for local consumption.

²⁰ *ibid.* 10 & 12
 ZT520088
 May 2016

The majority of surplus agricultural produce in Saravan is purchased by merchants from Vayk, Yeghegnadzor and sometimes from Yerevan. Milk is rarely sold, but is processed further to make cheese and yogurt, which obtain better prices. Meat is also a popular sale item. The section of highway connecting the settlements of Saravan, Saralanj and Ughedzor is an important physical location for trade and exchange. Residents of Saravan rural community therefore have good access to these trading sites.

While Gndevaz is an agriculture-based community, apricots are its dominant commodity. Gndevaz residents identify the absence of a storage hub and a unit for producing fruit jams and fruit juice, as a key barrier to the economic development of their community. Most of the farmers in Gndevaz sell their products to merchants from Yerevan, Georgia, Russia or Ararat.

In addition to the agricultural and animal husbandry activities of the residents of the rural communities, seasonal herding also occurs. A total of 58 seasonal herders have been identified who travel from other regions of Armenia to graze their cattle, and grow hay on the pasture land, during the summer months each year. Seasonal herders vary significantly, with the following typologies identified²¹:

- **Ughedzor families:** Family units from other parts of Armenia (mostly Vayk and Malishka village) come to Ughedzor in the summer and occupy the buildings comprising this abandoned village. The same families tend to occupy the same buildings every year. The family cultivates the garden associated with the house as well as one or more pieces of land in or just outside the village. Men take livestock to graze on pasture land under Saravan administration and also collect hay. Men from different households form groups of five to six and operate a shift system for supervising grazing animals, so that only one man per group needs to travel up to the pastures each day. Family units which lack an able male member can pay a neighbour or friend AMD 4000 (USD 9.70) per animal for the whole season's grazing.
- **Individual herding families:** Family units from other parts of Armenia travel to lands under Gorayk and Saravan administration in summer. Each family lives in a caravan, vehicle or bus and / or occupies ruined buildings in the area and / or puts up tents, or uses a combination of all these to meet its domestic and cattle needs. Women and

²¹ Typology developed based upon results of field survey conducted by WAI in 2012 as described in Section 4.11

children rarely stay for the whole summer, and tend to travel back and forth, visiting family members on a weekly or fortnightly basis. A number of family units tend to cluster together in nearby camps.

- **Groups of men:** Herding units made up of related men bring their combined stock to lands in Gorayk and Gndevaz and follow similar residential and herding patterns to individual herding families, as above.
- **Hired herders:** A herding unit made up of five to six hired herders bring other people's stock to land in Gorayk and Gndevaz. They follow similar residential and herding patterns to individual herding families, as above. Some hired herders also maintain their own livestock.

Land availability is not generally seen as a limitation or constraint to the agricultural potential of the region; however some concern has been raised in Gorayk over the number of seasonal herders who are using the land in this region.

4.17.9 Tourism Sector

Jermuk was established to be a tourist centre. The mineral waters natural to the area were known long before the establishment of the modern town in 1940, when it was set up as a destination for internal tourism within the Soviet Union. In size and importance, the town reached its height in the late 1980s with a population of 10,000. This number greatly diminished after the breakup of the Soviet Union with the 2001 census recording around 6,300 residents.

As a tourism spa town, Jermuk has both hotels and apartment accommodation available for rent. Hotels are considered the high-end tourist option, with apartment rental providing a lower-cost option. Tourism in Jermuk is highly seasonal, with hotels reporting full or near-full capacity during the summer months of July – September and also over a one-week period over New Year, as seen in Figure 4.17.9.

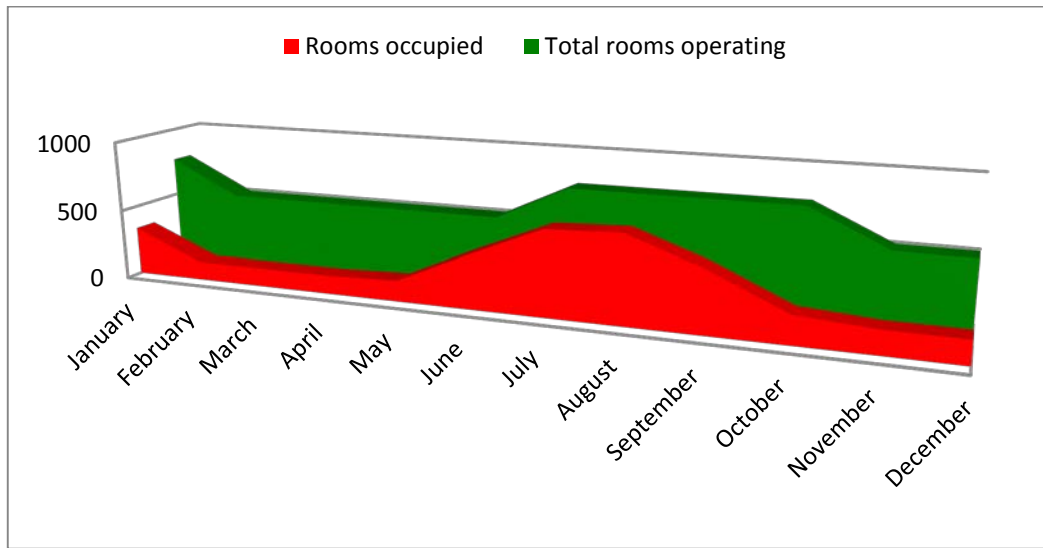


Figure 4.17.9 : Room Availability in Jermuk Across Calendar Year

Hotels are located across the length of Jermuk town, as demonstrated in Figure 4.17.10. An assessment of potential accommodation options across the local area identified 27 lodging facilities, with 2,410 beds in total (including some facilities which are currently under construction). Further details on the accommodation units available within the local area can be found in Chapter 6.21 and Appendix 8.24.

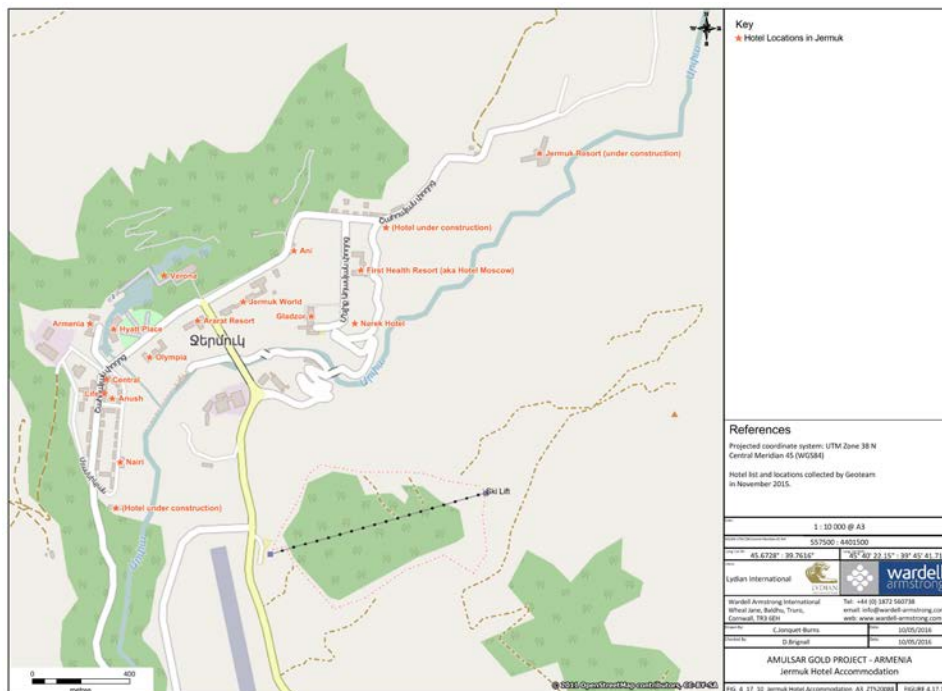


Figure 4.17.10 Jermuk Hotel Accommodation Locations

In 2008, Armenia adopted a tourism development concept paper aimed at increasing the gross national income through development of tourism countrywide. As part of this endeavour, the Ministry of Economy directed USAID to conduct an assessment in Jermuk outlined in Government Decree No. 1064²² to designate Jermuk as a “Tourism Centre” and outline a vision for the following outcomes:

- Turn Jermuk into a year-round spa resort that meets international standards through the development of:
 - Spa and winter tourism facilities and services as an alternative to European destinations;
 - An international chess championship centre;
 - A pan-Armenian and international youth camp destination; and
 - A cultural tourism destination.
- Ensure 100,000 annual visitors;
- Increase tourism-generated incomes to USD\$100 million; and
- Create 4,000 additional jobs.

Based on visitor surveys from 2006 and 2007, USAID researchers estimated the total income from visitors to be USD \$15 million per annum. Tourism was also estimated to generate 450 seasonal jobs within Jermuk. This analysis was conducted prior to the implementation of the Armenian “Social Packages” programme²³, which provides affordable holiday accommodation for Armenian public servants in a number of areas across Armenia, including Jermuk. During the tourism fieldwork conducted in November 2015, most hotels reported participating in the Social Packages programme, which has increased their occupancy rates.

The USAID analysis in 2008 indicated that the tourism targets defined above were achievable, but would take a number of years to achieve. The USAID analysis, using data available, estimated that the target for visitors would be almost a 200% increase in four years. The target of an industry generating USD \$100 million was considered to be approximately 50% more than what is achievable. While the analysis thought these goals were achievable, such

²² The September 2008 decree, designated the town as a ‘Tourism Center’ in accordance with article 2 and clause 4 of article 6 of the Law on Tourism and Tourist Activities of the GOA of the Republic of Armenia.

²³ Social packages for public sector employees were implemented by the Government of Armenia in 2012 designed to improve the attractiveness of work at state bodies and organisations. The Social Packages includes healthcare, support for mortgage payments, tuition support for children and “recreational services” for employees and their family members.

targets for a four-year period were not considered feasible and have not been reached.

Lydian conducted key informant interviews in 2013 to understand the level of progress, which had been achieved against these targets. The primary research involved interviews with 11 hotels, five representatives from the Jermuk health services, six Yerevan based tourism operators, and two representatives from the Yerevan based Department of Tourism within the European Academy. Two focus groups meetings were also conducted with small groups of residents in Jermuk. While the research does not cover all targets from the 2008 report, it seeks to characterise areas of progress, as well as topics and elements of the strategy that have not progressed as expected. This detailed assessment was conducted in 2013, and progress which is known to have occurred in the intervening period has been incorporated into the results.

Table 4.17.7: Review of 2008 Comprehensive Development Plan	
Targets 2008	Status as assessed by Lydian in 2013²⁴
Objective 1: Upgrade and improve the quality of spa, hotel, guesthouse and services to orient them toward foreign and domestic consumers (including introduction of international standards).	
<ul style="list-style-type: none"> • All spas refurbished per development control guidelines; • Develop building maintenance codes; • Laws requiring disabled access enforced; All hotels/spas with >30 rooms include internet; • At least four hotels providing a business center; five channels (each Russian and English) via satellite TV in major spas; and • Three restaurants/spas offer vegetarian food; five offer international food; 50% have printed menus. 	<ul style="list-style-type: none"> • Control guidelines not widely understood; most hotels visited were renovated or under repair for expansion or interior design (with Armenian building codes); • Most hotels/spas remain inaccessible to wheelchair users; • Progress is made in Internet: all hotels/spas visited have Wi-Fi; • There are only two or three public restaurants in Jermuk (two open in winter) with printed menus, with traditional Armenian food; and • Most hotels/spas provide buffet food service (not public): vegetarian food is available upon request.
Objective 2: Improve and upgrade the range of medical treatment facilities and services at spas to orient toward more foreign and domestic consumers.	
<ul style="list-style-type: none"> • Research on health benefits of mineral waters to be collated by 2009; external study completed by 2012; • Wellness services in 50% of spas; and • Three spas introducing new treatment 	<ul style="list-style-type: none"> • Since 2008 no research (internal or external) has been conducted; • Limited treatment diversification; and • Traditional mineral water and other treatment (mud treatment, stomach,

²⁴ Information on progress and the remaining challenges and limitations was collected by Lydian through primary research conducted in February 2013. The results of this assessment have not been validated with Jermuk stakeholders, however stakeholders were interviewed to conduct the assessment.

Table 4.17.7: Review of 2008 Comprehensive Development Plan	
Targets 2008	Status as assessed by Lydian in 2013²⁴
packages for specific target markets.	intestines, etc.) is provided in big hotels/sanatoriums only; whereas the small hotels serve as an accommodation. <ul style="list-style-type: none"> • A new spa hotel (Hyatt) has been developed and commenced operation in mid-2015.
Objective 3: Develop the winter skiing and other winter sports facilities in Jermuk	
<ul style="list-style-type: none"> • At least one ski school established by 2010 and two by 2012; • Bus or other transport service established and functional by 2009; • Ski pass scheme in effect by 2010; • Feasibility study completed prior to any new development; and • At least two events/annually developed. 	<ul style="list-style-type: none"> • There is no ski school; • No transportation service is available from hotels to ski lift; • Authorities were not aware of any feasibility studies; • Ski lift is not reported to seem to be busy; and • Special events (“Farewell to winter”) are held from time to time (a few years ago it was done annually).
Objective 4: Enhance Jermuk reputation as an international center for chess competitions through provision of appropriate facilities and promotion	
<ul style="list-style-type: none"> • Venue constructed to host up to 1,000 tournament participants at one time; • One major international tournament held in Jermuk annually; and • Prize funds comparable to those of other international tournaments. 	<ul style="list-style-type: none"> • Jermuk is hosting two or three international chess tournaments annually; participation of international chess players estimated at 10-15 persons; • No new building has been constructed as a chess venue; and • Prize fund is limited making it difficult to attract many international chess players.
Objective 5: Develop Jermuk capacity and reputation to host high quality pan-Armenian and international youth camps.	
<ul style="list-style-type: none"> • Public workshops held or surveys conducted to determine community needs and interests; • New sports facilities developed in keeping with community interests; and • Purpose built sports facility constructed by 2012: two trainers for each sport available trained to international standards. 	<ul style="list-style-type: none"> • There are no public sports, indoor clubs or recreational facilities in Jermuk for local residents or tourists; • There are two sport schools for boxing and chess; • Large hotels furnish their facilities upgrade their equipment; and • There has been no public workshop held to determine needs or collect feedback.
Objective 6: Improve the quality and diversity of tourism industries – attractions, restaurants, shops and leisure activities – to provide tourists with more activities, increase daily expenditure per tourist and increase longer stays.	
<ul style="list-style-type: none"> • At least three existing attractions renovated with signs and interpretation boards; • At least two evening entertainment venues developed by 2012; • At least two new trails developed and signed by 2012; • One mountain biking/horse trail developed; 	<ul style="list-style-type: none"> • No attractions have been renovated lately; no signage or interpretation boards, but sites are in acceptable condition through annual maintenance; • There is good potential for marketing of hiking or trekking trails, however, not used frequently;

Table 4.17.7: Review of 2008 Comprehensive Development Plan	
Targets 2008	Status as assessed by Lydian in 2013²⁴
<ul style="list-style-type: none"> • Investor attracted to develop bike rental facility or horse-riding center; • At least three retail shops catering to tourist needs developed by 2012; and • At least one internet cafe established on the right bank by 2010. 	<ul style="list-style-type: none"> • Bicycle rental businesses have developed, however, only a total of 6 bicycles available; • No outlets for tourists or internet cafes; and • Currency exchange only located within banks; two ATM's in the city.
Objective 7: Improve tourism management and staff capabilities: local tourism training programs, internships, apprenticeships and vocational training.	
<ul style="list-style-type: none"> • All 450 staff to have received basic training by 2012; • All staff dealing directly with clients to have received some basic language training; • Tourist office established by 2012; and • All tourism enterprise managers and senior staff to have received some form of management training by 2012 	<ul style="list-style-type: none"> • In the past two to three years, the Union of Hotels in Yerevan has had approximately 15 people enrolled in basic training and some technical courses (e.g., accounting, marketing) but not languages; • No tourist office in Jermuk at this point; and • The European Academy in Yerevan has had a tourism department for 10 years; however, there are no linkages between the academic institutions and Jermuk.
Objective 8: Develop a unique “brand” for Jermuk aligned with its current and potential competitive advantages.	
<ul style="list-style-type: none"> • Target customer profile prepared by municipality; • Branding and promotion strategy developed by 2011; • Promotional materials created and printed by 2009 and distributed to Jermuk tourist facilities, tour operators, tour guide; and • Web portal re-designed in at least 5 languages and included on other websites as a link. 	<ul style="list-style-type: none"> • Municipality representatives were not aware of any branding or promotion strategy; • Promotional materials (maps, brochures) are available in the Municipality that are given away to interested tourists upon request; and • Web-portals on Jermuk provide basic information on treatment, history, mostly in three languages.
Objective 9: Upgrade information on tourism services to encourage tourists to visit, more easily orient themselves and to increase awareness on activities in Jermuk.	
<ul style="list-style-type: none"> • All hotels/spas with more than 30 rooms provide online booking options; • Website for the ski lift operation established by 2010; • Visitor Information Center established and functional by 2010; and • Ten tourist information panels installed throughout the town. 	<ul style="list-style-type: none"> • Booking.com is widely used by hotels for online bookings; • Ski lift website has few images only; • No visitor information center, but interested tourists can get information at the municipality building; and • No tourism information panels.
Objective 10: Enhance the character of Jermuk as a tourism destination, typified by the architecture, green space, quality of the environment, cleanliness and hospitality of the people.	
<ul style="list-style-type: none"> • Implementation of guidance on sound planning and urban design – 50% by 2010, 100% by 2012. 	<ul style="list-style-type: none"> • Municipality representatives referred to the Armenian building or maintenance guides.

Table 4.17.7: Review of 2008 Comprehensive Development Plan	
Targets 2008	Status as assessed by Lydian in 2013²⁴
Objective 11: Improve and expand transport infrastructure and transportation services to and from Jermuk.	
<ul style="list-style-type: none"> • Road surface renovated by 2010; • Decision made on establishment of airport or heliport; • Growth Management Strategy completed by 2010; and • Signs provided at each major intersection in the road between Yerevan and Jermuk. 	<ul style="list-style-type: none"> • Roads or sections are periodically renovated; however, road signage on Jermuk is poor and limited; and • The Municipality representatives were not aware of Growth Management Strategy.
Objective 12: Upgrade modern communication links to Jermuk.	
<ul style="list-style-type: none"> • WiMax available in Jermuk by 2010; • 100% cellular phone coverage by 2010; and • 75% of accommodation establishments and restaurants accept credit cards by 2010. 	<ul style="list-style-type: none"> • All hotels/spas interviewed reported to have Wi-Fi in the rooms (all sizes); • The cellular phone coverage is 100%; • Credit card payment is not widely practiced; however, hotels can work through transfer.
Objective 13: Expand medical and health facilities (refer to Community Health, Section 4.15).	
<ul style="list-style-type: none"> • Polyclinic upgraded to provide accident and emergency facilities, x-ray facilities and basic surgery by 2012; • One fully functional dental clinic by 2010; and • Ambulance and paramedics trained and available by 2010. 	<ul style="list-style-type: none"> • The Jermuk hospital has not been upgraded in the past few years; • An X-ray room is now a storage area; the surgery room is not operational due to lack of medical doctors; • There are three small private dental offices (2 chairs each); • No optician; and • No paramedics trained or available and two nurses trained in first aid to provide services in ambulance.
Objective 14: Determine number of additional jobs likely to be created and assure adequate and affordable housing.	
<ul style="list-style-type: none"> • Growth Management Strategy completed by 2010; • 100% of owners identified, with mailing addresses; • At least 75% apartments or units available for monthly rental by 2010; and • At least 50% of units filled during off-peak season. 	<ul style="list-style-type: none"> • Owners of housing units currently empty are not identified; • Many apartments/units are being rented out (residents move to sub-standard places during the season, to accommodate visitors and tourists); • Focus group participants estimate that 80% of residents rent their places out during season; and • During off-season people also rent their places (e.g., during chess tournaments).

Table 4.17.7: Review of 2008 Comprehensive Development Plan	
Targets 2008	Status as assessed by Lydian in 2013²⁴
Objective 15: Improve the existing infrastructure: improve the quality of signage and develop a modern, pleasing appearance for city streets, pavements and the park.	
<ul style="list-style-type: none"> • At least 10 km of pedestrian areas improved per development control guidelines by 2012; • All relevant streets provided with street lighting; and • All road intersections in the town and all major tourist areas provided with signage. 	<ul style="list-style-type: none"> • Central sections of street roads are in poor condition; • Street lights are on during holidays; • No tourist-centered signage in the town; and • Private sector key informants interviews suggested that they removed signage of their hotel due to high fares and payments.
Objective 16: Develop solid and sewage waste treatment and disposal methods.	
<ul style="list-style-type: none"> • Town has renovated sewage system by 2012; • Landfill certified to no longer create groundwater pollution; and • Jermuk covered by functional waste and recyclable materials collection system. 	<ul style="list-style-type: none"> • Phase 1 of a new sewerage system has been installed (mechanical separation). Funded by KfW. Unknown when Phase 2 will be implemented; • The landfill is not removed and a large area is covered by functional waste.
Objective 17: Seek to align local agricultural production toward the needs of tourism accommodations, restaurants, and retail outlets; focusing on high quality organic production and local tradition.	
<ul style="list-style-type: none"> • Study undertaken by 2009 on market requirements for meat, dairy and vegetables; and • Agricultural producers improved productivity by 25%. 	<i>No information collected on this objective.</i>
Objective 18: Provide community facilities and services to improve the living standards and social environment of local people.	
<ul style="list-style-type: none"> • At least five play areas developed by 2010; • At least one community center developed; • At least 50% of unemployed people seeking jobs in tourism completing short courses by 2012; and • At least 50% of these individuals obtaining jobs in tourism within four months. 	<ul style="list-style-type: none"> • There is a small playground in the center; • Jermuk does not have a community center; • The Municipality representatives said that there is no organized training or education for job seekers in tourism; and • Key informants cite outmigration as being high in recent years.
Objective 19: Promote the religious and cultural heritage of Vayats Dzor and Jermuk for the economic and social benefit of the local community and visiting tourists.	
<ul style="list-style-type: none"> • Establishment of tourism marketplace by 2012; • At least one to two exhibitions or events held during peak and off-peak season annually; • Renovation of the 'Kings bathing area' in mineral water spring building and Gndevank Monastery; • Signage established at four cultural monuments; and • At least four events held annually. 	<ul style="list-style-type: none"> • Jermuk has a scattered handicraft and herb sale place in central location, poorly organized, with no toilet or covered stalls; • Art gallery rarely changes its exhibits; and • There used to be an annual winter event, but now takes place every few years.

Table 4.17.7: Review of 2008 Comprehensive Development Plan	
Targets 2008	Status as assessed by Lydian in 2013²⁴
Objective 20: Maintain and enhance the rural environment in and around Jermuk.	
<ul style="list-style-type: none"> • Gorge cleaned and industrial buildings removed; • Marked trails developed; • National Park to be designated by 2012; and • Agreement reached between stakeholders on zoning. 	<ul style="list-style-type: none"> • The Municipality representatives confirmed that the gorge and surrounding area is being cleaned regularly; • No network of marked trails; and • Jermuk is not designated as a National park.
Objective 21: Give authority for the development of Jermuk to the town itself, engage community by participation and feedback, to enhance the sustainability of Jermuk's development.	
<ul style="list-style-type: none"> • At least three courses held per year for the next three years for local government employees and officials; • Planning department established and operational by 2010; official hired by the planning department by 2009; and • At least four events held annually for local residents to celebrate culture and lifestyle. 	<ul style="list-style-type: none"> • Municipality does not have a planning department or a paid official for tourism; • Focus group participants indicate that there are few formal mechanisms or practical events for their participation and feedback.
Objective 22: Enhance the business environment to increase the chances of attracting private sector actors to invest in Jermuk.	
<ul style="list-style-type: none"> • At least 20 businesses opened each year; • At least 50% of businesses utilizing incentive programs; and • Determine by 2010 if it is appropriate to develop economic zones based on market analysis. 	<ul style="list-style-type: none"> • Jermuk is not an assigned economic zone; • While there was no specific information on new business, residents and key informants point to decreasing population as indication that economy is in decline.

There are no accurate and up to date visitor numbers for Jermuk. During the summer, hotels reported having full occupancy, which fell to 20 % in the low season. Some hotels close over winter due to an absence of heating (e.g. Gladzor Hotel) and demand (e.g. Moscow Hotel). The condition of hotel and guesthouses at this time was variable, with two of the spa hotels having been renovated between 2005 and 2008. The same study referred to a previous estimate provided by the Jermuk Municipality that the total number of annual tourists had fallen to 5,000 visitors from a peak of over 25,000 during Soviet times²⁵. Further research presented in this report, however, referred to a 2007 study, which estimated that the actual numbers of visitors was approximately 22,500 foreign leisure and health visitors, including people visiting for just an hour and those having much lengthier stays. Annually, it was estimated that domestic over-night stays in Jermuk amounted to 47,300 nights in 2008⁹. Further facilities for tourists, such as restaurants, were in a variable state of repair and had

²⁵ USAID (2008) Comprehensive Development Plan: Jermuk as a Destination Spa & Winter Tourism Center

operated a limited service in winter. Other attractions included visiting the mineral water springs, the outdoor environment, Gndevank monastery, three monuments in Jermuk and the ski complex located just outside of Jermuk offering limited runs.

Since 2008 progress has been limited and most targets outlined in the Comprehensive Development Plan have not been met. Developments have been made in the provision of upgraded internet connection across the range of hotels, renovation of some hotels and spas, a small number of annual chess tournaments have been held and there is anecdotal evidence of a small increase in domestic tourism. Progress has been limited, however, relating to the lack of planning for tourism in Jermuk, the lack of investment in tourist facilities and from a limited expansion in general tourist infrastructure which would facilitate further growth.

4.17.10 Natural Resource Use

The collection of plants for both consumption and medicinal purposes is undertaken by each of the rural communities (see Appendix 4.17.1). Residents of both Gorayk and Kechut barter herbs and mushrooms collected from open fields for agricultural products unavailable in their own areas (e.g. fruit and nuts).

4.17.11 Fishing

Recreational fishing is undertaken in the Vorotan River and in Spandaryan Reservoir. No instances of fishing for subsistence purposes have been identified. Two fish farms are located downstream of the hydropower power plant west of Gndevaz (also downstream of Kechut Reservoir) as described in Section 4.9.

4.17.12 Other Economic Activities

Small artisans operate in each of the rural communities providing carpentry, mechanical, plumbing and building services.

Remittances and pensions also contribute to the local economy in the study area. The contribution to livelihoods made by remittance payments varies between the rural and urban communities, with average remittances in Gorayk and Saravan being less than AMD 30,000 per month (USD 72). Remittances in Gndevaz and Jermuk were reported to be modestly higher, although this has not been validated.

All persons aged 63 and above are eligible for a state pension, while all those who have

worked for 25 years (and in some cases less than this), are eligible for a long service labour pension. There are also a number of other types of benefits such as health pensions, military pensions and special pensions; an individual entitled to more than one type of pension can choose the most suitable one for themselves.

Table 4.17.8: Pensioners in Study Area²⁶					
Population	Gorayk	Saravan	Gndevaz	Jermuk and Kechut	Armenia
Pensioners	54	30	145	1015	509,312
De jure population	418	282	899	7542	3.274 mln
%	12.9%	10.6%	16.1%	13.5%	15.7%

The actual percentage of pensioners in Gorayk, Gndevaz and Saravan is lower than the national average (see Table 4.17.8); however surveys and interviews in the study area revealed a high degree of dependence on pensions as well as other state benefits.

The average pension in Armenia was AMD 24,520 per month in 2009 and AMD 27,062 in 2011. A World Bank study²⁷ put Armenia's revised upper poverty line at AMD 30,920 (USD 74) per adult equivalent per month²⁸. Kinship networks generally look after older people whose next of kin migrate seasonally for work.

4.17.13 Income from Livelihood Activities

Average monthly income in the study area is summarised in Figure 4.17.11, with Jermuk and Kechut having the highest proportion of higher income earning population. Within the rural communities, qualitative and quantitative data indicates that subsistence agriculture is the dominant economic activity.

²⁶ Data sourced from "Village Passports" collected and prepared by Village mayors, collected in 2015.

²⁷ World Bank, (2011) Armenia poverty update using revised poverty lines, Europe and Central Asia Unit.

²⁸ Old basket (2004) poverty line was AMD 25,877

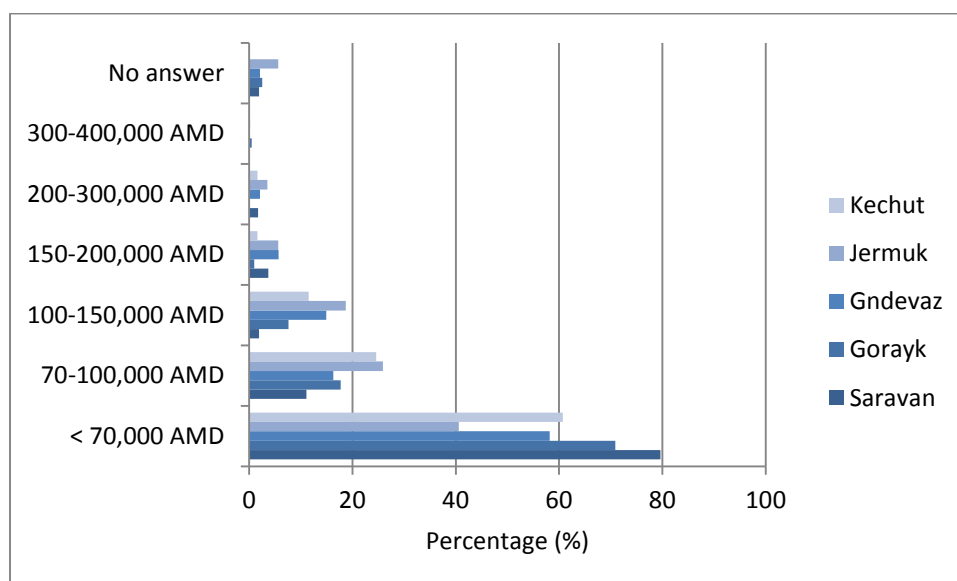


Figure 4.17.11: Average Monthly Incomes from Rural Communities (2010)²⁹

Given the informal nature of most income generating activities in the study area, income assessments have been derived from estimates and self-reported income bands. As one of the only commercial cultivation activities which is practiced in the rural areas, income from apricot production in Gndevaz was assessed. Approximately 60% of the surveyed Gndevaz population reported a monthly income of less than AMD 100,000 during the harvest season from apricot cultivation.

Figure 4.17.12 indicates the self-reported annual incomes generated from animal husbandry activities in the rural communities. Given the seasonal nature of these activities, this income is likely to be concentrated in summer months. Anecdotal data from the ecosystem services focus group discussions with seasonal herders suggest that herder incomes are low and that more cattle are required to sustain a livelihood³⁰ than was the case in the past. Herders indicated that they received approximately 1700 drams (~USD 4.20) per kilo when they sell the meat from their cattle, compared to market prices of approximately 2500-3000 drams (~USD 6.15-7.40)/kilo.

²⁹ ibid. 10 & 12

³⁰ Herders interviewed commented that owning 20 cattle used to provide for a good living whereas now closer to 30 or 40 cattle were required to achieve a similar standard of living.

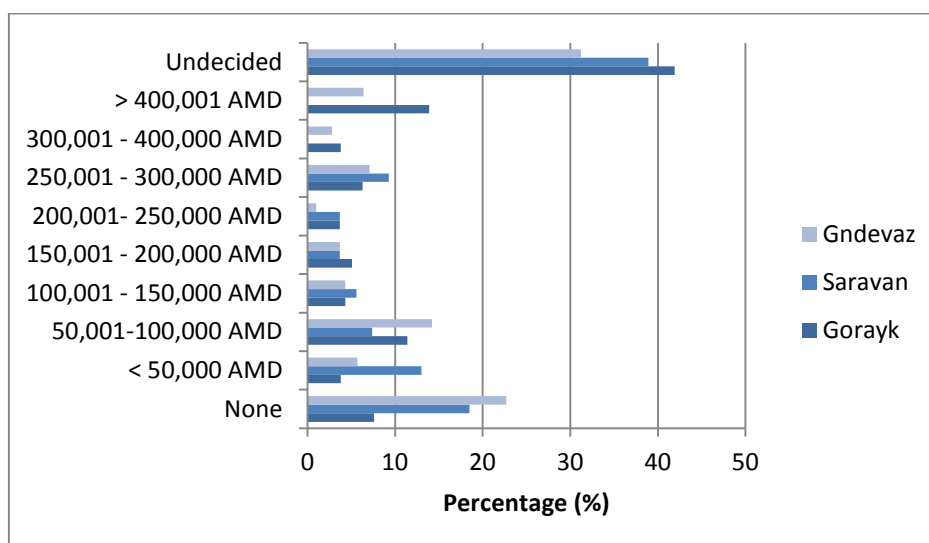


Figure 4.17.12: Annual Income Generated from Animal Husbandry in Study Area³¹

Survey responses indicate that the local study area is predominantly a low income area, with Figure 4.17.13 indicating the self-assessed perception of financial capacity within the communities. This assessment does not include perceptions of financial capacity amongst seasonal herders; however, through interviews it is understood that this group feels economically vulnerable.

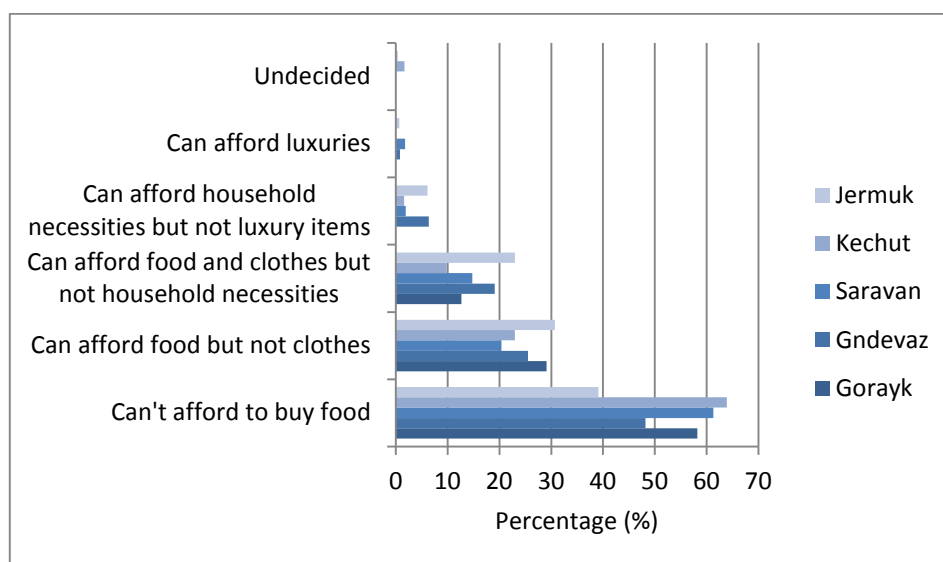


Figure 4.17.13: Perceptions of Financial Status³²

³¹ ibid. 10

³² ibid. 10 & 12

4.17.14 Skills Profile

A skills audit was conducted by Lydian in the study area in 2011 and was repeated again in 2014 (conducted by Armenian consultancy, MPG).

Table 4.17.9 summarises the self-reported skills held in the rural communities, in 2011, in the study area that may be relevant to the Amulsar Project. Unsurprisingly, more men hold skills of immediate relevance to the project than women in these communities.

Generic Skill	Gorayk (%)		Saravan (%)		Gndevaz (%)	
	Men	Women	Men	Women	Men	Women
General Mechanical	93.8 %	-	52.2%	-	81.1%	4%
Crane operator	12.5%	-	34.8%	-	-	-
Excavator	31.3%	-	13.0%	-	11.3%	-
Bulldozer operator	33.3%	-	17.4%	-	13.2%	-
Front end loader	29.2%	-	21.7%	-	18.9%	-
Truck driver	66.7%	-	21.7%	-	18.9%	-
Welder	45.8%	-	60.9%	-	58.5%	-
Saw operator	-	19.4%	-	15.8%	-	24%
Other operator	37.5%	-	-	-	9.4%	-
Construction worker	79.2%	-	87%	15.8%	79.2%	-
Electrician	75.0%	-	91.3%	42.1%	-	-
Carpentry and masonry worker	37.5%	-	52.2%	10.5%	43.4%	-
Engineer	6.3%	3.2%	-	26.3%	35.8%	-
Nurse	-	6.5%	-	26.3%	-	12%
Accountant	-	9.7%	-	15.8%	-	16%
Cook	-	19.4%	-	15.8%	-	12%
Other	-	38.7%	17.4%	26.3%	-	28%
Notes:						

In the course of the skills audit, skills comparable to those that would be required for various roles at Amulsar mine were discussed. Many respondents reported having more than one skill; the table above should be read as a profile of skills present in the community that relate to proposed work at the mine, rather than as proportions of people in the community practicing them.

³³ Data sourced from Geoteam Skills Survey (2011), included as Appendix 4.17.2

Of the 844 questionnaires which were completed in the June 2014 skills survey, only 2 respondents indicated that their highest level of education was primary school. By far the majority (approximately 39%) indicated they had completed secondary school, with nearly a fifth (19%) indicating they have completed higher education (a four year university degree or greater). Importantly, a significant level of higher education completion was seen consistently across all villages (Gndevaz 14%; Gorayk 19%; Jermuk 21%; Kechut 12%; and Saravan 24%), highlighting the importance placed on education in all communities in Armenia. This is highlighted in Figure 4.17.14.

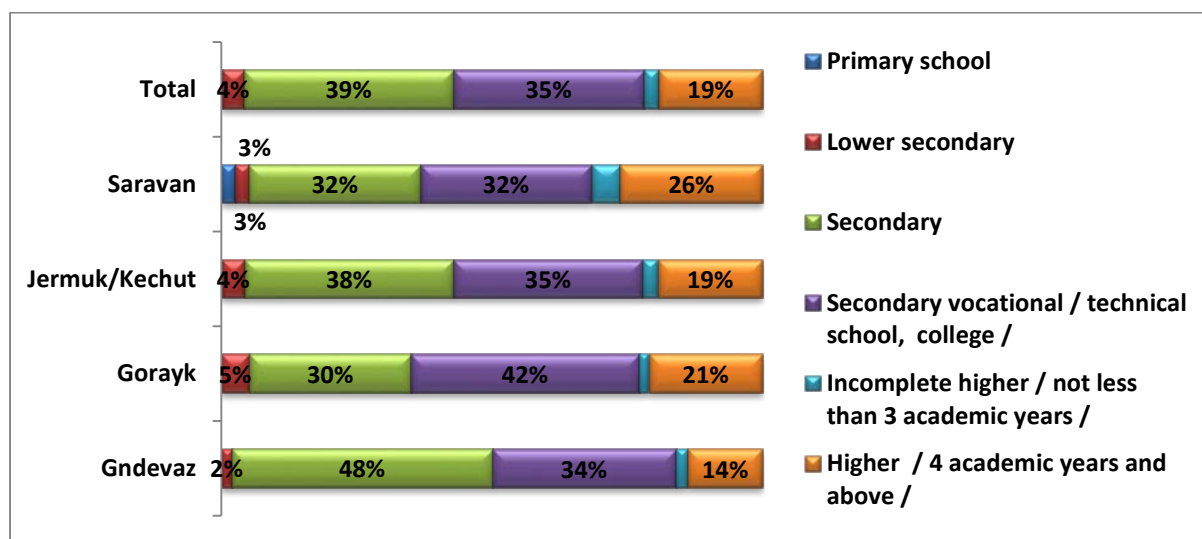


Figure 4.17.14: Educational level of respondents within communities³⁴

This educational attainment will provide a good basis upon which to train people as needed for new roles.

As the working language of the Amulsar Project will be English, it is relevant to note that approximately 10% of all survey respondents indicated that they have good or professional (2 top categories) levels of written, spoken and reading skills in English. Speaking English is not a requirement for the majority of roles on the Project, but will be an asset for an individual seeking employment.

Within the skills survey, respondents were asked to indicate whether they had specific skills

³⁴ Data sourced from MPG (2014) Skills Survey Initial Analysis

of relevance to the mining industry and to provide an indication of their skill level. The figures below represent the proportion of respondents who reported having good or professional skills levels in specific fields:

- 7% plumbers
- 6.5% electricians
- 6.5% carpentry and masonry skills
- 6.5% welders
- 11% experience in scaffolding and construction
- 15 responded that they are engineers (1.8%)
- 12.5% accountants
- 8% professional cleaning experience
- 10% professional catering experience
- 3% crane operators
- 3% backhoe operators
- 3% excavator operators
- 4.5% bulldozer operators
- 4% front end loader operators
- 7.5% truck drivers

The survey also identified the number of people with different classes of drivers licence, as illustrated in Figure 4.17.15.

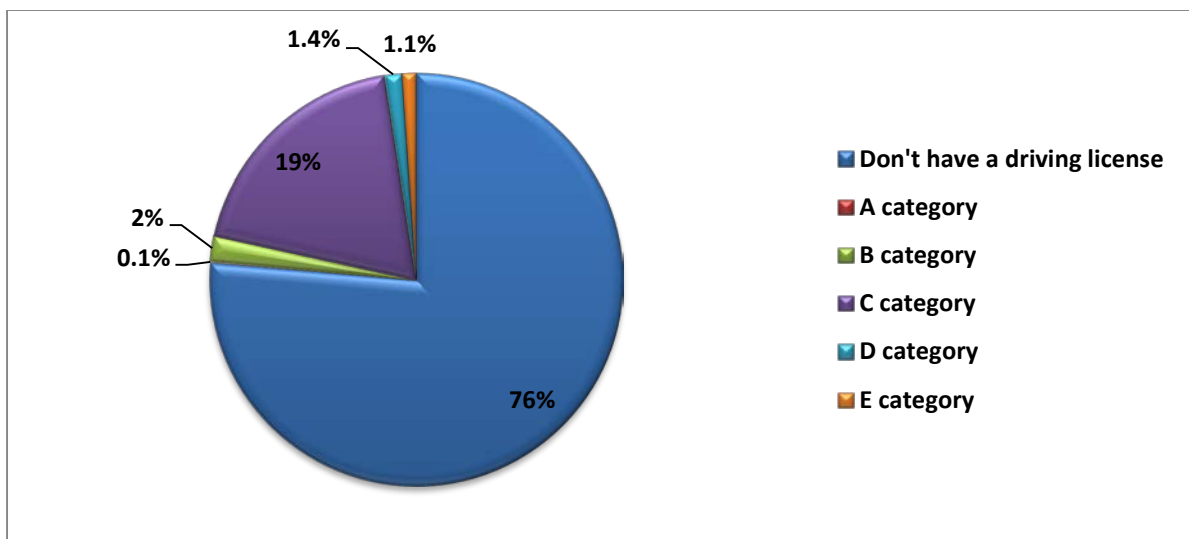


Figure 4.17.15 Ownership and Class of Drivers Licence³⁵

Approximately 38% of respondents indicated that they currently have salaried jobs, with an additional 5% reporting to be self-employed. The majority of respondents (48%) indicated they are currently unemployed. Importantly, over 75% of all respondents indicated they have worked at some time in the past. Within the context of the development of the Project, the high education levels and diversity of skills held within the community at present should provide opportunities for a significant number of local community residents to successfully gain employment on the Project. Table 4.17.10 provides an indication of the employment status within the local communities, highlighting the high levels of unemployment experienced in the area at present.

	Salaried employment	Self-employed	Looking after dependents	Seasonal job	Other	Subsistence or basic farming	Currently unemployed
Gndevaz	40%	4%	3%	2%	1%	12%	37%
Gorayk	44%	2%	0	12%	3%	7%	32%
Jermuk	38%	6%	2%	<1%	1%	<1%	53%
Kechut	29%	5%	8%	5%	0	5%	48%
Saravan	45%	0	0	13%	0	5%	37%

³⁵ ibid. 31

³⁶ ibid. 31