

Livelihoods, Mining and Peasant Protests in the Peruvian Andes

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Abstract

This paper explores the relationships between Andean Peru's new mineral-based neoliberal political economy, protests against transnational mining corporations and the transformation of livelihoods taking place in the region. It evaluates how new transnational mining operations are dramatically altering livelihood resources in two case-study areas of the Peruvian Andes and in what ways they are linked to community mobilizations against mining operations. The paper argues that the utilization of frameworks based on resources and livelihoods can contribute to analyses of the spatial relationships between transnational mining corporations and local livelihood transformation. Through a comparative case study of two peasant protests that began in late 1999 and continue today in the Cordillera Huayhuash and Cajamarca, the paper illustrates how transnational mining corporations are transforming the environmental, social and economic contexts for livelihoods in the region and how these changes are linked to household engagement in protests against mining operations. Key Words: *Peru, social movements, mining, livelihoods.*

Resumen

Este estudio explora la relación entre la nueva economía política neoliberal del Perú, las protestas contra corporaciones mineras transnacionales y la transformación de los medios de subsistencia que tienen lugar en la región. Evalúa como las nuevas operaciones de la minería transnacional están alterando estos medios en dos áreas-caso en los Andes peruanos y de que manera están relacionadas con las movilizaciones comunitarias contrarias a las operaciones mineras. El autor argumenta cómo el uso de marcos basados en recursos y sustentos podría contribuir al análisis de las relaciones espaciales entre las corporaciones mineras transnacionales y la transformación del sustento local. A través de un estudio comparativo de dos protestas campesinas que comenzaron en el año 1999 y se continúan hasta hoy día en la cordillera Huayhuash y Cajamarca, el estudio muestra como tales corporaciones están transformando los contextos ambientales y socio-económicos de los medios de subsistencia dentro la región.

Palabras clave: *Perú, movimientos sociales, minería, medios de subsistencia*

Introduction

One of the most prominent elements of change in the Peruvian Andes over the course of the past decade has been a dramatic increase in both the pace and scale of mineral exploration and exploitation activities. Following the country's sudden turn under the leadership of Alberto Fujimori to neoliberal economic policies and structural adjustment in the early 1990's, transnational mining corporations, in conjunction with Peruvian mining firms, have transformed the Peruvian economy into one of the continent's leading exporters of mineral resources (Ministry of Energy and Mines 2000).¹ For example, the mineral sector of Peru's economy has grown from almost no foreign direct investment (FDI) between 1976 and the early 1990's to more than 246 estimated projects between 2001 and 2003 (Directorio Minero del Perú 2000a). In the year 2000, mineral exports accounted for more than 50 percent of total exports, and are expected to increase markedly in coming years (CONITE 2000).

The dramatic mineral-based economic and environmental changes underway in the Peruvian cordilleras are also spurring a broad transformation of highland livelihoods in areas of new mining activities. New "mega" mining projects have become some of the largest and most influential landowners and agents of change in regions that have been traditionally plagued by the country's highest rates of poverty and unemployment.

The effects of Peru's new neoliberal mineral-based economy are just beginning to be understood by scholars and policy-makers. Debates over the economic impacts of new mining activities are still largely isolated to regional case studies and economic trend analyses (e. g. Aste 2000; Directorio Minero del Perú 2000a; GRADE 2000; Indacochea *et al.* 1998; Kuramoto 1999; Peru Monitor Monthly 2000). Additionally, studies examining the new relationships between mining activities and communities have begun to appear throughout Peru (e. g. Caravedo 1998; Cooperación 1999; Ossio 1998). However, few studies are presently underway to our knowledge that seek to understand how new mining activities are transforming the resources upon which local livelihoods are based.

While studies of the ramifications of Peru's economic transformation are just beginning, particularly in light of the dramatic political events that have taken place over the course of the past several years,² the social reactions to new mineral exploitation in the highlands are well underway. In the past several years large-scale and widespread protests against transnational and Peruvian mining firms have been taking place throughout the country. Beginning in the early 1990s, relatively isolated social reactions against individual mining operations have blossomed into a nation-wide network of organizations concerned with the environmental and social effects of mining (e.g. CONOCAMI 2000).

This paper seeks to explore the relationships between Andean Peru's new mineral-based political economy, protests against mining operations and the transformation of livelihoods in the region. In particular, this paper illustrates how transnational mining operations are transforming household livelihood resources in new areas where new mining operations are underway. In addition, this paper argues that one way of understanding in a very proximate fashion *why* resistance to mining is taking place is through evaluating *how* mining operations are transforming livelihood resources and how households perceive these changes. This paper argues that new frameworks concerned with local resources and livelihoods provide one optic for illustrating the inter-scalar nature of relationships between the local scale (households) and the transnational scale (transnational mining corporations). Thus a livelihoods approach can detail how mining corporations undertake their operations and how households and communities react to these changes. In addition, this paper argues that resource-oriented livelihood frameworks provide a useful heuristic for understanding the complex and manifold changes taking

place in resources that are utilized by households to produce livelihoods as mining operations both are initiated and proceed and how particular resource transformations are linked to household participation in protests against mining corporations.

This study applies a livelihoods approach to a comparative analysis of two case studies of peasant protests that took place in the Peruvian Andes in 1999. The protests in the Cordillera Huayhuash as well as those in Cajamarca were in response to the practices of transnational mining operations and have continued to the present. The comparative case-studies illustrate how water, land, social and economic resource transformations are taking place and how they might be linked in a proximate fashion to protests against transnational mining corporations.

Mining Mountains: The New Peruvian Mining Industry

Over the course of the past decade, the Peruvian mining sector has come to occupy a pivotal position in the economy as the country has undergone dramatic political and economic restructuring. In the early 1990s President Alberto Fujimori's administration rapidly reconfigured the economic and political structure of the country through economic reform measures and the adoption of a new constitution. These changes were largely accomplished through presidential decree and to a lesser degree arguments that neoliberal reforms would promote economic growth and political stability (e. g. Fujimori 1995). Since then, Peru has been converted from an economy dominated by state controls to a liberal economy dominated by private sector and market forces. Comparatively, while neoliberal reforms have swept through Latin America in the past decade (Gwynne and Kay 1999; Klak 1998), Peru has become one of the most open and liberal economies not only in Latin America, but in the world (IMF 2001).

In the mining sector, the Fujimori administration adopted a wide-ranging privatization program that offered international investors attractive mining opportunities and eliminated competition from national firms that controlled significant access to mineral deposits. In addition, the Fujimori administration implemented a floating exchange rate, eliminated price controls, direct subsidies and restrictions on foreign investment and lifted exchange controls and restrictions on remittances of profits, dividends and royalties. Tax stability contracts and a host of legal and financial protections were also offered to large foreign investors. Furthermore, a radical reformation of land tenure rights under the National Mining Cadastre Law guaranteed mining firms control of the necessary land resources to implement their operations (Ministry of Energy and Mines 2000; Peru Monitor Monthly 2000).

Alongside the creation of Peru's new neoliberal economy, the Peruvian military reduced guerilla insurgency in the highlands by capturing and imprisoning leaders of revolutionary movements such as the Shining Path. For the mining sector, the Peruvian military's actions in Peru's rugged cordilleras allowed geologists to travel safely through the highlands in search of new mineral deposits and to establish new mining claims. Consequently, in 1992, more mining claims were staked than for the previous fifteen years (Peru Monitor Monthly 2000).

These economic and political changes have resulted in dramatic macro economic growth and an influx of new foreign direct investment (FDI) into the country. Between 1990 and 1998, Peru's foreign trade expanded over 85 percent in exports and over 215 percent in imports, the economy has grown by more than 30 percent since 1994 and the stock of FDI has increased from \$1.3 billion in 1990 to over \$15 billion in 1999 (CONITE 2000). The mining sector has been a very important element of this dramatic economic growth as it now accounts for almost 50 percent of the countries exports (Ministry of Energy and Mines 2000) and has become the primary axis for national

economic development. As Augusto Baertl Montori, president of Peru's National Society of Mining, Petroleum and Energy states, "national social and economic progress depends for the most part on our mineral resources" (Directorio Minero del Perú 2000b: 56).

Transnational mining corporations have been at the forefront of Peru's economic growth and expansion since 1992. In general, mining corporations have prospered greatly during Fujimori's revolution, as Peru's legislation and incentives led foreign corporations to invest into the country. Today, eleven of the world's top twenty mining corporations now have operations in Peru (Peru Monitor Monthly 2000).

While Peru's economic structure has been radically transformed over the course of the past decade and transnational corporations have hastened to invest in Peru, the social context in which the mining sector is operating is plagued by high levels of poverty. Nationally, more than 37 percent of the population lacks basic necessities and more than 15 percent of the population is extremely impoverished (INEI 2000). However, these figures are much higher in the rural sierra highlands, where new transnational mining operations are underway. For example, it is estimated that 83 percent of the population in the rural highlands lives in poverty (World Bank 1996).

The mining sector in post-Fujimori Peru has retained its importance. While mining investment in the country slowed between 2001 and 2002 as investor uncertainty and a global recession have plagued the country, the mining sector is still the primary axis of the Peruvian export-led economy under President Alejandro Toledo's administration.

Mounting Mining Peasant Protests

Peasant protests and resistance in the highlands have a rich history in Peru, dating their genesis to the Spanish conquest. Since colonial times, peasant rebellion has been treated in Peru by various authors concerned with colonial rule and forced labor (Spalding 1984; Stern 1988) as well as land reform and guerilla warfare (Pool and Rénique 1992; Stern 1998). However, Peru's rapid transformation to a new neoliberal political economy in the past decade has changed the context of peasant resistance and suggests a need for new research to understand how peasant protests are taking place under Peru's these political and economic structures. This is particularly important given the fact that Peru's political system has been transformed again in the past several years with the election of President Alejandro Toledo.

The changing context of peasant resistance has been evident as the mining sector has asserted itself as the vanguard of Peruvian neoliberal economic development during the last decade and the impacts of mining projects have been projected throughout the Andean highlands. Clearly positive economic impacts have been geographically dispersed throughout the country, albeit in an uneven pattern. However, as mining firms have begun their operations they have been met with protests, blockades, marches and in some cases violent confrontations. In the past several years the frequency and intensity of protests against mining operations in Peru has increased dramatically.

Historically, mining has been an important sector of the Peruvian economy and has been treated by various scholars. For example, the historical impacts of the mining industry in the highlands have been treated by scholars concerned with mining and region economic development and nationalization (e.g. Becker 1983; Long and Roberts 1984). In addition, new research is being conducted that seeks to understand the dynamics between communities and transnational and national-based mining (e.g. Caravedo 1998; CONOCAMI 2000; Cooperación 1999; GRADE 2000; Ossio 1998). However, relatively little research treats how mining operations are affecting the distribution and use of local livelihood resources in different geographic regions of the country as well as how

changes in livelihood resources might be linked to peasant protests. The next section elaborates a framework for understanding how transnational mining corporations are affecting local resources in the country and how these changes might be linked to understanding peasant protests.

Livelihoods and Resources: Frameworks for Understanding Protests

The question of how peasants (*campesinos*) produce livelihoods has been a recurrent theme in research on poverty, social and economic transformation and development in the Andes. Research since the 1970s and 1980s has been concerned with the nature of peasant modes of production and the types of resources households access and transform in their livelihoods activities (Bebbington 1999; de Janvry 1981; Deere 1990; Knapp 1991; Preston 1998; Zimmerer 1998). This research has been cognizant of the fact that the peasant economy is inextricably linked to the wider political economy that limits access to resources, conditions peasant household production and can establish unequal terms of exchange. Subsequently, and in much broader geographic treatment, political ecology research has attempted to more closely examine how the nature of this wider political economy affects the resource use decisions of livelihood producers and ecological processes (Blaikie 1985; Blaikie and Brookfield 1987; Peet and Watts 1993).

While increased attention is being directed towards the relationships between the wider processes of national and international political economies and local resource use, there is still little analysis of the specific scalar links between international and national actors operating in this larger political economy and local transformations. Scholars are increasingly recognizing this need (Bryant and Bailey 1997; Bury 2001; Long, 1992). In the case of Peru, transnational and national mining corporations are one of the major elements of the wider political economy transforming the Andes. Linking these corporations to the types of local changes they are promulgating is one way of more closely examining linkages between local scales of analysis and the wider political economy. In terms of the protests that have been occurring throughout the Peruvian highlands, linking corporate actors with local resource transformation can illustrate the inter-scalar spatial dynamic between mining operations and communities, thus detailing not only how local transformations are taking place, but also offering the opportunity to detail the immediate and proximate causes for why peasants might engage in resistance. Both case studies presented in the following section demonstrate how these linkages have developed over the course of the past several years.

Another important feature of current research in the Andes, as well as in other developing areas, is a resurgent interest in the types of resources peasants utilize in their production strategies. New frameworks for understanding the types of resources that rural peasants utilize in their livelihood activities have emerged in development studies and other fields (Bebbington 1999; Leach et al. 1998; Scoones 1998). These frameworks have sought to broaden our understanding of livelihood production by including analyses of the environmental, cultural and social resources that are utilized in livelihood production. In addition, research has also highlighted the utility of these frameworks for understanding how livelihoods respond to the transformation of local resources (Bebbington 2000).

The case-studies presented in this paper operationalize these new frameworks in the context of household livelihood production in order to illustrate how the magnitude of mineral exploitation occurring in the Peruvian Andes is leading to a diverse and robust transformation of local resources that peasants utilize to produce their livelihoods. In areas impacted by mining operations, local livelihoods are responding simultaneously to environmental, economic, social and cultural changes. The case studies presented in the

following sections synthesize the complex nature of these changes for two regions of the country. Drawing on these new perspectives on livelihoods, a more detailed illustration of the types of changes that are occurring is presented.

Finally, this research is related to social movements literature concerned with the ways in which neoliberal reforms in Latin America are transforming grassroots movements (e. g. Foweraker 2001; Gezerlis 2002). While the diverse field of social movements literature has illustrated how social movements have been changing over the course of the past several decades in terms of identity, political processes and forms of resistance (e. g. Alvarez *et al.* 1998; Colburn 1989; Escobar and Alvarez 1992; Pile and Keith 1997), this research is particularly interested in illustrating how the transformation of livelihood resources might be more closely linked with a more complex understanding of the proximate causes of peasant protests and resistance. This approach is different from urban research in Peru concerned with social movements (Stokes 1995) and research on rural mobilization strategies in the highlands (Starn 1999) in that it seeks to understand how placed-based transformations of resources are linked to mobilizations.

This particular research is a preliminary effort to understand how water, land, social and economic resources are linked in a proximate fashion to mobilizations. In this respect, it does not serve as a necessary *and* sufficient explanation for why social protests are taking place in the region because it does not attempt to integrate these events into the larger historical and political context of resistance in the region. In addition, it does not offer thorough insights into the types of strategies peasants are utilizing. However, it does illustrate the types of resource transformations that are occurring for local livelihood producers and how often their perception of these changes is linked to their efforts to resist singly and collectively against transnational mining operations.

Peruvian Case Studies

Field research conducted in Peru during 1999, and continuing to the present, illustrates how livelihood frameworks can provide a useful heuristic for understanding how transnational mining operations transform livelihoods as well as how these transformations might be linked to peasant protests. The first case study is located in the central Peruvian highlands of the Cordillera Huayhuash and the second is located in the northern Peruvian highlands of Cajamarca at Yanacocha (Figure 1). Both the Cordillera Huayhuash and Cajamarca are sites of mining operations headed by transnational corporations: Mitsui (Japan) and Newmont Mining Corporation (USA), respectively.

Both case study sites are remotely located in the central Andean corridor of Peru at elevations ranging from 3000-4000 meters. The sites are remotely located in the sense that many communities are not (or have not been) accessible by vehicle, have little infrastructure such as electricity and potable water systems and are often isolated due to severe weather. In addition, both case study areas possess abundant mineralogical resources, which until the early 1990s were either unexplored or unexploited.

In the Cordillera Huayhuash case study area, communities and households are distributed in high inter-Andean valleys that are fed by glacial runoff from the surrounding mountain peaks. Communities are primarily located along the valley floors, although households engage in grazing and agricultural activities along the flanks of the Cordillera Huayhuash escarpment. The Cordillera Huayhuash is also an area of rich biological diversity and natural beauty similar to the more widely recognized Cordillera Blanca range to the north.

In the Cajamarca case study area, communities and households are distributed throughout several high production zones along the flanks of the Cajamarca valley and surrounding high mountain meadows. Water resources are limited to natural aquifer



Figure 1. Study area.

regeneration in the high mountain valleys and are frequently seasonal in their availability. Households engage in a variety of agricultural and livestock production activities that are practiced among several ecological zones.

In the 1990s, new transnational mining operations began in both research sites. Under the Fujimori administration's neoliberal reform package, new transnational mining operations were offered a host of incentives to begin operations. In Cajamarca, Newmont Mining Corporation's gold mining activities commenced in 1993 and today the region is host to the largest gold mine in Latin America and the largest cyanide heap leaching operation in the world (Newmont Mining Corporation 2001). In the

Cordillera Huayhuash, Mitsui Mining and Smelting Company has begun construction and development of the region's lead and zinc deposits, but is not yet in full production.

In order to evaluate how household livelihoods are being transformed and how they are linked to peasant protests in the region, two case studies of peasant protests and mining operations were conducted between May and August of 1999. Materials gathered both before and after 1999 have also been utilized (e. g. Bury 2002; Kolff 2001). The research methodologies employed were purposive case studies based on the activities of Newmont Mining Corporation and Mitsui Mining and Smelting Company and communities affected by their operations. Overall, five communities were selected for study in the two case areas (two in the Cordillera Huayhuash and three in the Cajamarca region). Data collection was based on participant observation and key informant interviews with community leaders, government representatives, mining representatives and religious and civil society leaders. In addition, semi-structured questionnaires were conducted with 139 households (Huayhuash=80, Cajamarca=59) that evaluated household livelihood activities, mining-related impacts and changing livelihood patterns. Households were sampled in the Huayhuash case-study using a snowball sampling technique (which included almost every household in the two case-study communities) and a random sampling technique in the three Cajamarca case-study communities. Secondary data collection and archival research was also conducted in both research areas, in surrounding communities, in Lima and in the United States. Finally, focus groups were conducted in the case-study communities in order to confirm preliminary data results and further detail livelihood transformations and their relationship to peasant protests in the region.

Livelihood Transformation and Social Protests

In both case study areas, significant social protests have taken place over the course of the past several years related to the impacts of new mining activities on household livelihood resources. Two specific examples were selected for discussion in this research as they took place during or shortly after the 1999 field research period and were addressed by interviewees during the household interview process.

The social protests in the Cordillera Huayhuash occurred at the Pallca Project mining operation of Mitsui Mining and Smelting in the remote Llamac valley. In June, 1999, relations between the mine and rural communities changed dramatically when the excavation of a mining tunnel inadvertently punctured a large subterranean aquifer. The outburst of water and debris deposited significant amounts of sediment and effluent into a river a few kilometers upstream from the two-case study communities. The immediate reaction to the incident was a community protest and violent take-over of the mine involving over 100 people, which subsequently led to a violent confrontation between peasants and national police in which three peasants were shot and wounded. Since then, new peasant protests and resistance to the mine have taken place in the region.

The social protests in Cajamarca occurred several months later, during December, 1999, at the gates of Newmont Mining Corporation's Minera Yanacocha operations 17 kilometers north of the city of Cajamarca. In this instance, which has been followed by several more heated confrontations and social mobilizations, approximately 6,000 people assembled at the entrance of the mining site denouncing any further mining exploitation in the region. The *campesinos* charged that the mine has caused massive social and environmental problems.

Based on both qualitative and quantitative comparative analyses of the case-study data, several important livelihood resources were identified that illustrate how transnational mining operations are transforming household livelihoods and how they

might be linked in common to both the Cajamarca and Huayhuash protests. These include: 1) water quality and supply, 2) land tenure/grazing areas, 3) social resources, and 4) economic resources. Overall, these resource categories were identified based on their frequency of appearance in household interviews and because they were often associated by household interviewees as reasons for participating in social protests in the region.

The first common aspect of household livelihood transformation and peasant protests is in relationship to changes in the quality and quantity of water resources. In both instances, interviewees perceived their livelihoods to be seriously threatened by the actions of the mining corporations. Much of this perception revolves around the importance of a plentiful source of clean water for crops and livestock, as well as for personal consumption.

In the Cordillera Huayhuash, households indicated that water resources have been seriously compromised. For example, one month after the mining accident, 89 percent of households believed the river, a primary source for water supplies, was contaminated, and 74 percent considered it to be a “dead river”, without hope of recovery (Kolff 2001). While Mitsui’s project directors and officials from the Ministry of Energy and Mines in Peru maintained that the water was “safe” to drink according to national water quality standards, households in the case-study communities indicated they were no longer using the water and that consequently many of them had little to no access to water resources. This illustrates how mining has impacted water resources in the region and how this has also affected household livelihood activities. In addition, it also illustrates how significant changes in water resources led to household perceptions that surrounding water resources were being degraded, which prompted many of them to engage in protest activities.

Similarities, with regard to water resources, can also be observed in Cajamarca. The single largest challenge to Newmont’s environmental record over the course of the past several years has also been the impacts of the corporation’s mining operations on water resources in the region. Households in the case-study communities rely on aquifer release and surface water that originates in the area of Newmont’s mining operations for their farming and subsistence activities. Newmont also utilizes the aquifers and the water of one lake near the mine and mine run-off is discharged into surrounding streams.

Recent research utilizing publicly available water quality tests from several national administrative sources charge that elevated levels of minerals such as copper, zinc, manganese and iron are present in local water courses and this is due to mine-related runoff. In fact, in 1999 Newmont was charged with violations of World Health Organization (WHO) standards over 159 times (Drillbits and Tailings 1999). However, the reliability of these charges is questionable and difficult to confirm since access to water quality data in the Ministry of Energy and Mines has been hampered by political problems. Despite these problems, case-study interviewees expressed serious concerns about the quality of the water they were receiving. Frequent responses by interviewees related to livelihood activities include declining animal health and productivity, reduced fish catches and declining agricultural productivity.

In addition, Newmont has been charged with reducing the water supply flowing in streams and canals from the mine site. Interviewees repeatedly discussed reduced water flow and the hardships that it created because they have had a reduced capacity to irrigate and therefore a reduced agricultural yield. This was also attributed by interviewees to increased poverty and nutritional and health problems.

Overall, interviewees indicated that Newmont’s operations have significantly altered the availability and quality of water resources that they utilize. While this evaluation may only be based on household perceptions of changes in water resources and has been neither proved nor disproved in this case-study research or any other forum to date, it is

one of the primary reasons that has motivated households to engaged in protests. For example, in the case-study communities where water resources were most impacted by Newmont's mining activities, twice as many households responded that they had engaged in protests in comparison to communities that have experienced little change in water resources (Bury 2002).

Land tenure issues, especially grazing rights, are another important category of household resource transformation and linkage to protests in both case-study sites. Because agriculture and livestock are such an important part of livelihoods in the region, any encroachment upon these traditional resource bases of the peasants has been met with staunch resistance. Mining operations require significant portions of land for mine operations, road construction, infrastructure, drilling, and flotation ponds. Many of those sites coincide with some of the most desirable grazing and cropland areas, thus creating conflicts over landuse priorities.

Most of the land surrounding the Llamac river valley, the site of Mitsui's operation in the Cordillera Huayhuash, has traditionally been communally-owned. These lands include the farmland and pastures in the immediate vicinity of the towns, as well as the higher, more remote valleys used for grazing livestock (primarily sheep and cattle) during the dry season. These grazing lands are extremely important for campesino livelihoods as nearly all interviewees indicated that they engage in herding and livestock production activities. Mitsui is responsible for many changes affecting grazing and land-use livelihood activities in the region. This includes the heavy siltation of the river that resulted from the mining accident, soil erosion and deposition caused by road construction and the physical space that infrastructure, roads, and treatment ponds occupy.

Another key factor is that Mitsui is required by law to negotiate and agree upon compensation for the communities who use the land and those with private holdings in areas where the mine will operate. While Mitsui owns the mineral rights to the Pallca area (where the protest occurred), it does not own the land itself and is thus required by law to reach an agreement with the landowners. This has involved significant contestations as Mitsui has attempted to secure the permission of the locals from the case-study communities to begin operations.

These contestations are well illustrated by the on-going negotiations between the communities in the Cordillera Huayhuash and Mitsui. In the months after the protests at Mitsui's mine site, the nature of the negotiations changed from that of pure compensation for the contamination caused by the accident, to a new arrangement that consisted of finishing the construction of an irrigation canal from a glacial lake in a neighboring valley. However, Mitsui was only considering financing the construction if the investment could be exchanged for the rights to mine a 1,500-hectare area of land belonging to one of the communities. The canal-for-land deal was effectively separated from the debate over compensation for the mining accident, thus re-focusing the discussion in such a way so as to favor Mitsui's land-acquisition potential. It was also attributed by case-study interviewees as a significant alteration of their livelihood resources as well as another reason for engaging in social protests as interviewees expressed concern that Mitsui was negotiating unfairly for land and not compensating households for mining-related damage to their water resources.

In Cajamarca, Newmont argues that it has paid "fair-value" market prices for the land, some 80,000 hectares, it has acquired for its operations. Several thousand people have either sold their lands to Newmont or were forced to accept "market value" for their land holdings. Initially, during the early stages of the company's operations, Newmont utilized expropriation procedures and paid local landowners what the company determined as fair market value for their lands. Today, the company negotiates with individual and community landowners as their use of expropriation procedures

resulted in several lawsuits and violent altercations. However, many farmers who were paid relatively little for their land have only been able to buy a fraction of the land they once had as prices on the open market have increased dramatically since the mine began operations in the region. In 1993, company representatives paid as little as US\$80 per hectare to land owners. Today, land values per hectare around the mine have soared to more than US\$1000 (GRADE 2000). Consequently, many local farmers who sold their lands in the early 1990s have moved to more marginal lands or away from the mine and have not been able to replace their holdings. In addition, many households have been forced to continue their grazing and farming activities on less land, which is leading to overgrazing and degradation of soil resources. Household interviewees repeatedly indicated that Newmont's land acquisition activities were a source of deep resentment and distrust in the region. In fact, many households that were unable to acquire new lands have been at the forefront of peasant protest activities in the region as leaders and organizers of community mobilizations.

A third important category of household resource transformation and a potential linkage to the protests in the case-study communities is the peasants' perception that the mines were responsible for, or would eventually adversely affect, social resources. Interviewees frequently cited social problems that range from prostitution, theft, family dislocation and the loss of cultural traditions. This was also linked to the behavior of international and national mine employees. How much of this could actually be proven remains an important question, yet widespread perception exists that mining development is leading to social problems in the communities, which has again prompted protests.

In the Cordillera Huayhuash case-study, for example, 85 percent of households indicated that they believed their lives would actually be worse off when the mine went into full production. Many people are fearful of their homeland becoming a "centro minero" or abandoned, run-down, and generally a problem-stricken area, and frequently refer to other areas with mining development and notorious pasts. In addition, local farmers and communities have charged that the mine has contributed to social dislocation and significant disruption of social networks between families and communities.

In Cajamarca, interviewees repeatedly referred to the social problems the mine has created such as increased debt problems, family disruption and prostitution in the region. For example, while the town of Cajamarca has experienced dramatic economic growth over the course of the past few years, the "boom town" atmosphere has led to significant changes in the community as crime and street prostitution have increased near the central city plaza. This has been widely reported in the local press (e. g. Panorama 1999). In addition, local campesinos who either sold their land or were moved due to expropriation maintained that their social relations and communally-based household livelihood activities have been impoverished due to the mine's activities (Bury 2002).

The fourth and final commonality between livelihood resource transformations and the protests around Newmont's and Mitsui's projects is that household economic resources are being affected negatively. As households have sold their land, have access to less or lower quality water for agriculture, livestock and consumption, or have lost access to grazing reserves, they have also experienced substantial negative economic impacts. However, perhaps the most important aspect of changes in economic resources that both cases hold in common is that interviewees express frustration over the *future* economic benefits derived from mining activities. This explanation varies from the first three evaluations of household livelihood resource transformations and their linkages to peasant protests in that instead of being clearly a rejection of the negative impacts of mining, the common theme is that households seek to access more of the positive economic resources related to new mining operations in the region. Thus, the impacts of

mining on economic resources in the present and contestations over the *perceived* impacts in the future are both important issues. Negative responses to the economic impacts of the mines have taken the form of peasants claiming, quite accurately, that the higher paying professional positions requiring more training will go to workers from outside the area. Interviewees also indicated that the majority of profits will go directly to the foreign corporations, and that the taxes they pay have been unjustly held up in the coffers of the central government and never re-distributed.

In the case of the Cordillera Huayhuash, Mitsui's mining operation is now expected to total about \$60 million in total investments (Kinzoku, Palla Project presentation). The arrival of numerous miners from other parts of the country, as well as large quantities of machinery and equipment in an area that, up until five years ago, had rarely seen a car, is illustrative of the sizeable influx of capital and labor to the region. For the surrounding rural villages, which rely almost solely upon agriculture and livestock, this has resulted in mixed perceptions. There is animosity towards Mitsui because households are experiencing few positive economic changes, but there is also a deep desire to take advantage of the many benefits that the mine might potentially offer.

In the Cordillera Huayhuash, one of the most important potential economic impacts of the mine is related to employment. Every community member is allowed at least one four-week rotation of manual labor at Mitsui's mine site, which pays the equivalent of about US\$20 in total. Compared to the other options available for peasants to enter the cash economy, this represents an important and highly coveted opportunity. Unfortunately, it has also led to increased conflict within and between communities around these much sought-after jobs. The protest in the Cordillera Huayhuash can thus also be understood as a contest over the distribution of future economic resources for households.

In terms of impacts on economic resources, Newmont has invested several hundred million dollars in the Cajamarca region. Much of this investment has been directed towards employment in the region, mining technology and rural infrastructure. In addition, the mine has paid millions of dollars in mining royalties. However, political problems have hampered the redistribution of most of these monies to the localities, communities and households affected by the mine's operations, even though Peruvian law requires that a significant percentage of mining royalties be returned to local communities. Interviewees in the case-study communities consistently referred to frustration over the lack of redistributed mining royalties to the local communities and both household and community leaders indicated that was an important reason why they have engaged in social protests in the region.

In terms of employment, Newmont's operations employ over 1400 people on a regular basis. In addition, numbers increase to 4,000 during the dry season for new construction projects. However, many of the mine employees have been drawn from outside the Cajamarca region and outside of the country because the mine requires highly advanced skills in many positions. Interviewees in each of the case-study communities consistently referred to the lack of employment available at the mine and expressed frustration over the fact that many of the mine's employees were not drawn from local communities.

In addition to direct employment, Newmont's operations have stimulated a very limited amount of direct complementary effects through local contractor and supply operations (Kuramoto 2000). The reason that such effects have been so limited is because of apparent local corruption and inefficiency; mine officials argue that the lack of trustworthy suppliers forced the company in many cases to resort to foreign suppliers (Santa Cruz, 1999). This has only exacerbated relations between the mine and local

communities; informants consistently argued that the mine does not contribute to local resource development in the form of contracts and supplies and that few households have been able to obtain employment with such local firms.

Conclusions

The comparative case-study research in this paper represents an attempt to evaluate how transformations of water, land, social and economic livelihood resources have been taking place in two areas of the Peruvian Andes. As such, it has identified similar types of transformations taking place in both case-study sites, and detailed how livelihood frameworks can be utilized to disaggregate the types of local resource transformations that transnational mining corporations such as Newmont Mining Corporation and Mitsui Mining and Smelting are promulgating under Peru's new neoliberal mining-led economy. The case-studies represent an initial and limited comparative effort to understand how resource transformations are taking place in two regions of the country, thus increasing our ability to recognize similar geographic patterns of change at a broader scale of analysis. The research presented in this paper clearly suffers from a relatively limited range of household resources and an incomplete understanding of more comprehensive livelihood transformations that are undoubtedly taking place in the case-study communities, which is one important concern that will be taken up in future research.

In addition, this research attempts to link the activities of two transnational mining actors to local livelihood resource transformations through the lens of political ecology. In an effort to "scale-up" our discussion of common patterns of change across geographic regions, our data presentation does not fully address the linkages between these transnational actors and local household livelihoods. Significant lacunae exist in terms of corporate behavior, national and local government behavior and the evolution of community/corporation relationships. This is another important question that future research will address in more detail. However, this research represents an initial effort to begin to understand the specific types of relationships that exist between households and transnational corporations and how they are spatially linked to livelihoods and local resources.

Finally, based on our use of livelihood frameworks and through our examination of changes in specific household resources, we have attempted to illustrate how resource transformations and perceptions of resource transformations might be linked in a proximate fashion to protests taking place in both case-study areas and around the operations of specific transnational mining corporation's operations. While our analysis of the Peruvian case-studies presents tentative explanations for the proximate causes of peasant protests, it clearly neglects to consider the highly unequal historical socio-political and economic context in which they are embedded. In other words, while our explanation may be necessary it is not sufficient. In the Peruvian highlands, the historical context of land reform, decades of peasant struggles against transnational corporations and the Peruvian state as well as deeply entrenched patterns of extreme poverty are critical elements in any rigorous explanation of why protests are so prevalent. However, this study provides an entry point to understanding the complex nature of reactions against the mining sector in Peru and is based on extensive field work in communities engaged in these activities. Future research should link our analyses with broader historical forces and economic structures in order to provide a more exhaustive treatment.

Our discussion of livelihood resource transformations and social protests also constitutes an important avenue for linking proximate causal explanations for social movements with larger discussions in the social movements literature. Place-based

explanations for social movements can provide for a more comprehensive understanding of how different types of resource transformations are linked to mobilization strategies and how they might change over time. Overall, we believe that understanding why peasants have resorted to protest as a form of action is important because it underscores both the magnitude of the transformations underway in the Peruvian Andes and that in many cases “taking to the streets”, so to speak, is one of the last options that exists for peasants to protect their ability to maintain meaningful livelihoods.

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Notes

¹ In 1993, President Alberto Fujimori suspended Peru’s constitution and abolished congress in a bloodless coup, or *autogolpe*. After the coup had succeeded, Fujimori restructured the country’s political and economic system through a host of neoliberal reforms (see Fujimori 1995 for more details).

² In late 2000 Peru was radically transformed as President Alberto Fujimori fled the country to seek asylum in Japan and in 2001 Alejandro Toledo assumed the presidency after a new election was held.

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