Recent developments in the Poverty/Energy/Vulnerability nexus in Kyrgyzstan and Tajikistan

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December 2010
(draft for comments, not citation)

Overview

This paper focuses on three sets of recent (2009-2010) developments concerning the poverty/energy/vulnerability nexus in Central Asia: (1) recent trends in household welfare and energy, water, and food security, as reflected in official data in Kyrgyzstan and Tajikistan; (2) recent research on these topics; and (3) the causes and implications of the April events in Kyrgyzstan, pertaining to these issues.

Recent macroeconomic, socio-economic, energy, and hydrological trends

This paper's point of departure is the impact of the winter energy crisis of 2007-2008 on Tajikistan, and of the subsequent drought of 2008 on Tajikistan and Kyrgyzstan.[1] These events:

- Exacerbated perennial intra-state tensions along Central Asia's water-energy nexus;[2]
- Ushered in a multi-year episode of heightened national and household energy and water insecurity in Kyrgyzstan and Tajikistan;
- Inter-acted with 2007-2008 global food price trends to sharpen national and household food security concerns in these two countries;
- Were then exacerbated by the impact of the global economic crisis, which resulted *inter alia* in significant declines in the remittance inflows that are a key coping mechanism for vulnerable households in both countries; and
- Contributed to the government of Kyrgyzstan's decision to dramatically increase energy tariffs in January 2010—a decision that helped precipitate the April 2010 overthrow of President Bakiev, and pushed the country toward the course on which it now finds itself.

The winter crisis and drought, which led to UN-sponsored humanitarian appeals in Tajikistan and Kyrgyzstan during 2008-2009, also revealed that the development progress associated with the rapid GDP growth enjoyed by these low income countries during most of the previous decade had turned out to be quite fragile. Sharp reductions in winter electricity and heat supplies for households, as well as for schools, health care institutions, and enterprises, led to significant declines in industrial output and growing problems of access to public services. According to informal estimates, up to 1 million people in Tajikistan spent much of the last two winters without reliable electricity supplies. The official data also report significant increases in

[1] See Johannes F. Linn, "Impending Water Crisis in Central Asia: An Immediate Threat", 2 June 2008, Brookings Institution, Washington D.C. (http://www.brookings.edu/opinions/2008/0619_central_asia_linn.aspx).
[2] Questions about the extent to which the issues discussed here are relevant to other Central Asian (or CIS) countries are not taken up here. The absence of publicly available high-frequency official data on these issues in Uzbekistan and Turkmenistan, and policies in these countries, argue against expanding the geographic focus of this research beyond Kyrgyzstan and Tajikistan. In light of its upper middle-income country status, and its relatively low levels of income poverty and household food and energy insecurity, this research is not extended to Kazakhstan.

prices for energy (and communal) services during this time (see Table 1 below), running well above growth in the consumer price index. The emergence of these non-traditional threats to household welfare, in the form of declining access to energy, water, and public services—particularly when combined with high food and energy prices and falling remittances—blurred the distinction between development programming and humanitarian/emergency responses, for governments and donors. References to "compound" and "slow onset" crisis to describe this situation became increasingly common.

Table 1—Macroeconomic trends, 2008-2010

	Kyrgyzstan			Tajikistan		
	2008	**2009**	**2010**	**2008**	**2009**	**2010**
Output trends						
GDP growth	8.4%	2.3%	-1%	7.9%	3.4%	7%
Industrial output (annual change)	15%	-13%	14%	-6%	-10%	13%
Gross agricultural output (annual change)	1%	7%	-3%	-21%	8%	10%
Electricity production/consumption[3]	-21%	-6%	9%	-8%	1%	9%
Price trends						
Consumer price inflation rate (annual ave.)	25%	7%	5%	21%	8%	6%
Food price inflation rate (annual average)	33%	2%	5%	26%	6%	6%
Energy price inflation rate (annual average)[4]	30%	22%	14%	97%	59%	43%
Communal services inflation (annual ave.)[5]	26%	20%	30%	73%	53%	30%
External trends						
Current account balance (% of GDP)	-13.2%	-0.4%	n.a.	0.9%	-3.9%	n.a.
Remittances (annual change)[6]	65%	-15%	24%	58%	-31%	22%
Months of merchandise import coverage	3.9	6.0	7.0	1.7	2.3	2.4

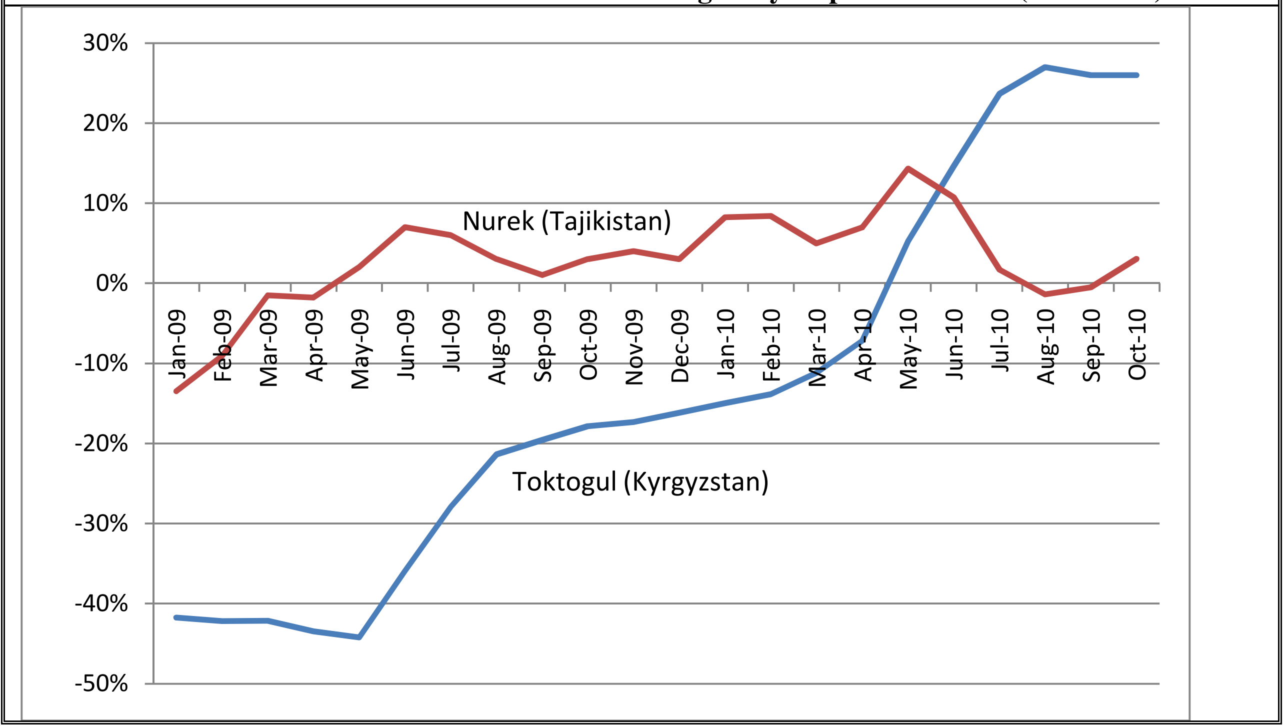
All data are taken from State Statistical Committee and National Bank websites, or are UNDP calculations, except for the current account balances, which are taken from the most recent EIU country reports. 2010 data are from the most recent month available, generally through September or October.

Fortunately, a number of favourable trends took hold in these two countries in 2009-2010, attenuating some of the underlying compound crisis drivers. First and foremost of these was the end of drought conditions, thanks to two consecutive relatively warm, wet winters. As the data in Chart 1 below show, water volumes in the main hydropower reservoirs along the Vakhsh and Naryn cascades (which account for more than 90% of electricity generation capacity in Tajikistan and Kyrgyzstan, respectively) have undergone dramatic improvements during the last 18-24 months. These improvements have made possible recoveries in electricity generation

[3] For Kyrgyzstan: reported electricity generation; for Tajikistan: estimated electricity consumption (based on reported SSC electricity generation and net export data). The 2010 data for Tajikistan are for the first half of the year.
[4] For Kyrgyzstan: reference is to prices for "electricity, gas, heat and other fuels" component of the consumer price index; for Tajikistan, reference is to the "electricity" component of the consumer price index.
[5] For Kyrgyzstan: data are for increases in household water tariffs.
[6] Data for Tajikistan are supplied by the IMF, as presented in UNDP's monthly risk monitoring reports.

and industrial production (see Table 1 above), and therefore household energy security, since mid-/late 2009, in both countries.

Chart 1—Water volumes at Central Asia's largest hydropower stations (2009-2010)



UNDP calculations, based on data posted on the CAwater-Info website (http://www.cawater-info.net/analysis/index_e.htm). Each data point shows the average water volume for that month (in 2009 or 2010) relative to the average for that month going back to 1991-1992. Data points along the horizontal axis (zero deviation from monthly averages) correspond to monthly norms.

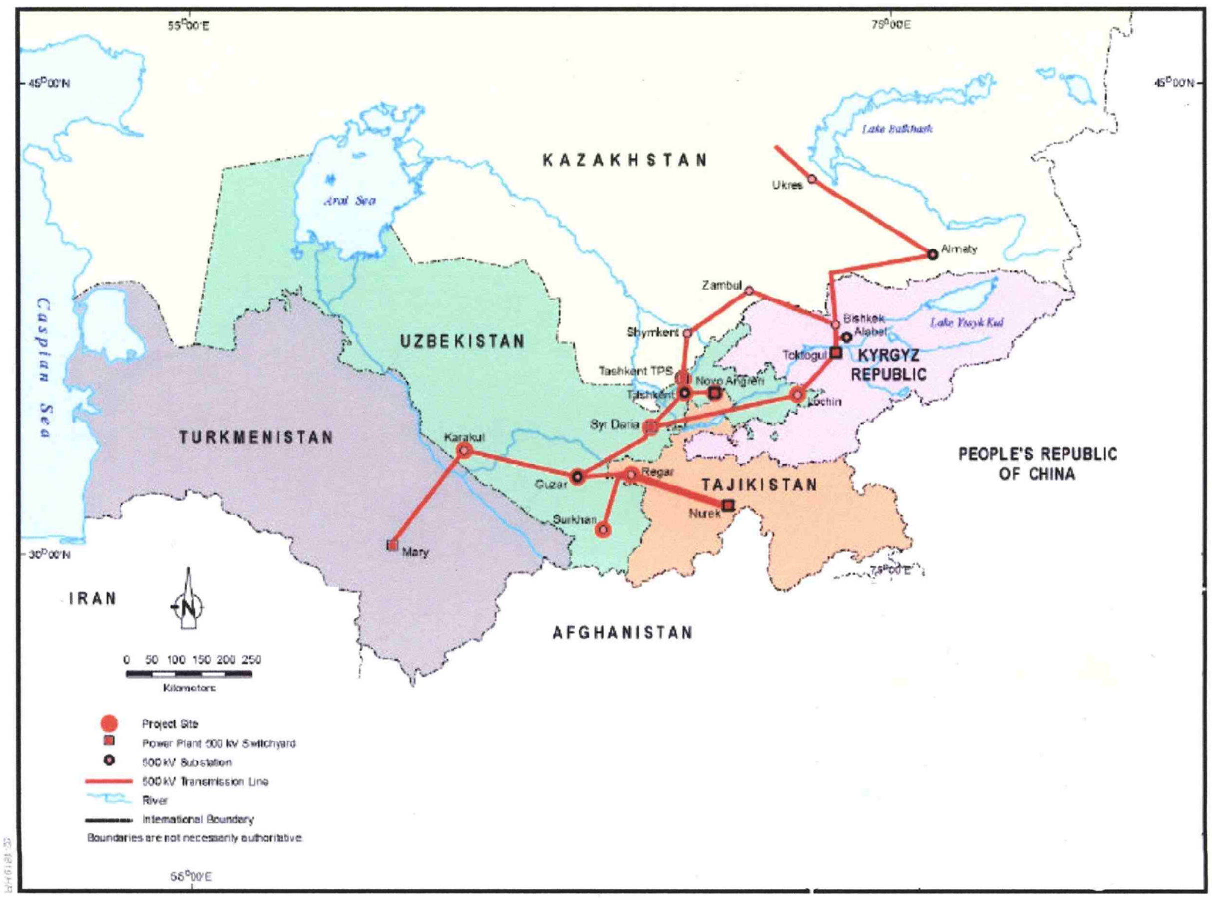
The relatively mild impact of the global economic crisis on these countries, both of which reported slower but positive GDP growth during 2009, was a second favourable development. On the one hand, the relatively low growth rates, combined with continuing population growth, and large declines in remittance inflows, imply that growth in living standards—particularly for vulnerable households—essentially ground to a halt in 2009. In Kyrgyzstan, where these pressures were compounded by a large external adjustment,[7] a 2.6% decline in final consumption has been officially reported for 2009. On the other hand, these trends compare quite favourably with much larger declines in household incomes and consumption reported by a number of other CIS economies in 2009 (e.g., Ukraine, Moldova, Armenia). Moreover, the improvements in hydropower generation capacity produced by the last two warm, wet winters, combined with the strong recoveries reported in remittance inflows (see Table 1) and higher prices for key exports

[7] As shown in Table 1, Kyrgyzstan's current account, which posted a deficit of 13% of GDP in 2008, essentially swung into balance in 2009. Combined with 3% reported GDP growth, this swing implies a significant reduction in domestic demand. Most of this decline was apparently accounted for by gross investment, which official data show dropping by 35%.

(gold, aluminum), set the stage for a return to rapid industrial and GDP growth in Tajikistan in 2010 A similar trend was apparent in Kyrgyzstan during the first quarter of 2010, prior to the events of April and June that sent the economy into a tailspin.[8]

However, new energy-sector risks appeared in late 2009, in the form of Uzbekistan's and Kazakhstan's withdrawal from—and therefore the *de facto* dissolution of—the integrated Central Asian electricity transmission grid (see Map 1 below). In the past, Kyrgyzstan's northern regions could rely on the automatic dispatch of (with subsequent settlement for) electricity generated in Kazakhstan; southern regions could rely on electricity generated in Uzbekistan (and Tajikistan). Likewise, Tajikistan's northern regions could rely on the automatic dispatch of (and subsequent settlement for) electricity generated in Uzbekistan. The end of these arrangements has pushed these countries towards bilateral commercial deals in which prices and quantities of electricity trades are determined *ex ante.*

Map 1—Central Asia's electricity transmission grid

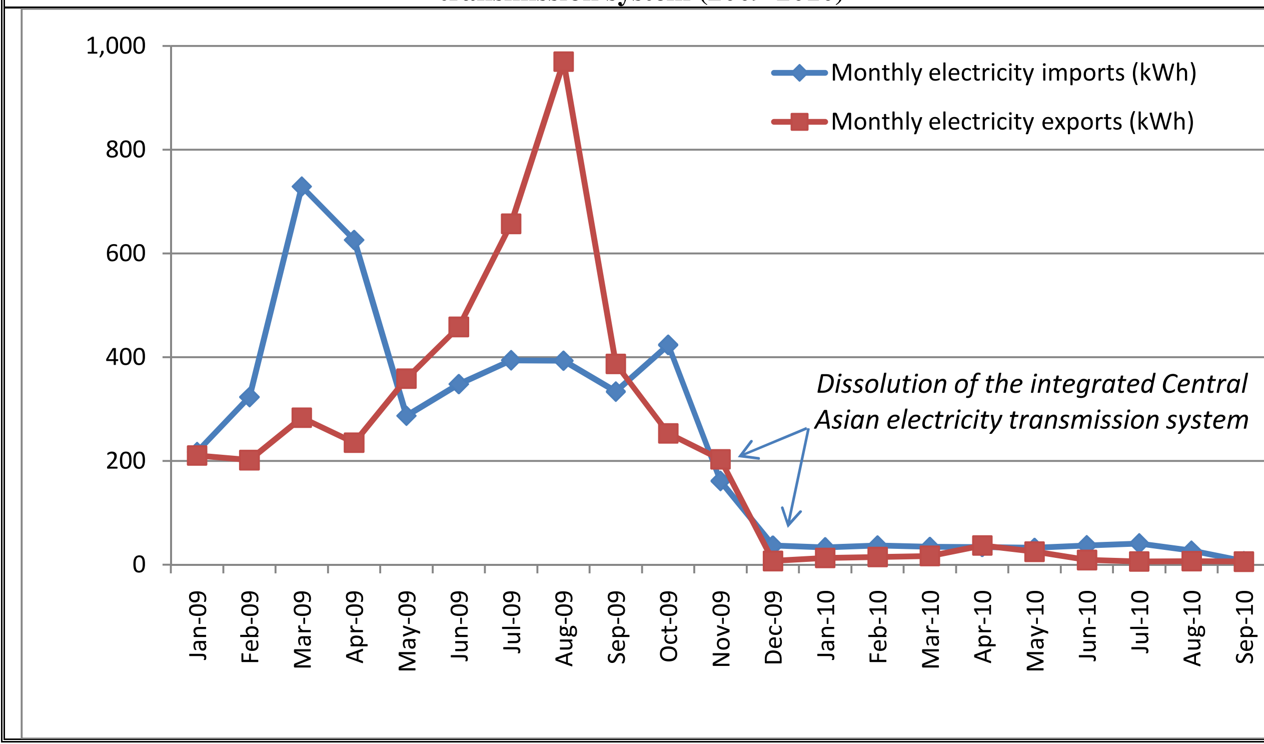


Source: World Bank, 2008. More recent additions to the transmission infrastructure, as well as smaller national connections, are not shown.

[8] For more on this, see Ben Slay, "Kyrgyzstan: From 'compound' to socio-economic crisis?", http://europeandcis.undp.org/senioreconomist/show/DB1BDF26-F203-1EE9-B9D2AC9FEC7A7FC1.

Developments during the winter of 2009-2010 indicate that the transition from a regional to bilateral trading arrangements occurred without catastrophic consequences. This was due in part to increases in domestic generation and transmission capacity: Tajikistan completed the construction of the South-North transmission line that wheels power from the hydro stations on the Vakhsh cascade to Sughd oblast in the north. This new capacity allows Tajikistan to by-pass portions of what had been the common regional grid that lie outside its borders, particularly in Uzbekistan. (The completion of the Sangtuda I hydropower generation station also helped.)

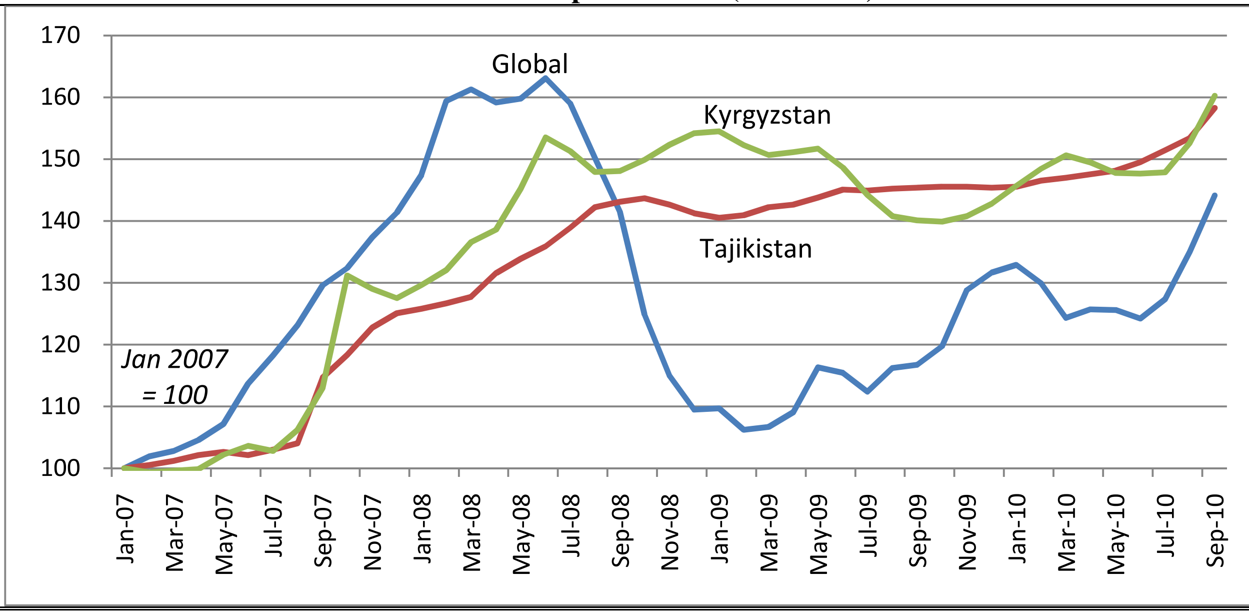
Chart 2—Tajikistan: Impact of the dissolution of the integrated Central Asian electricity transmission system (2009-2010)



On the other hand, official statistics indicate that Tajikistan's electricity imports and exports dropped sharply in late 2009, after the dissolution of the integrated Central Asian electricity transmission system (see Chart 2 above). This does not bode well for Tajikistan's ability to import electricity going forward—especially from (or via) Uzbekistan, with whom relations in 2010 have been particularly tense. Matters could be even more serious for Kyrgyzstan, whose by-pass plans (e.g., the construction of the Datka-Kemin transmission line) seem to have fallen into the hole in Kyrgyzstan's energy sector created by the April rollbacks of the large tariff increases introduced in January 2010. Kyrgyzstan may therefore find itself exceptionally reliant on electricity imports from Uzbekistan and Kazakhstan (and Tajikistan), at a time of heightened energy (and political) uncertainties within the region. On the other hand, the 27 November launch of the first generator at the Kambarata-2 hydropower plant on the Naryn cascade could lighten Kyrgyzstan's energy tensions this winter.

Accelerating food price inflation is an additional cause for concern in Tajikistan and Kyrgyzstan. As Chart 3 below shows, food prices in these two countries were pulled up with the global surge in food prices between January 2007 and mid-2008—and never really declined afterwards, particularly in Tajikistan. As of mid-2010, food prices in both countries remain some 50% above their January 2007 levels—compared to a 25% increase for global food prices.

Chart 3—Food price trends (2007-2010)



UNDP calculations, based on national food price data reported on the State Statistical Committee websites, and on global food price data reported on the FAO website.

A number of factors appear to be responsible for these continuing high food prices. These include:

- Exchange rate pass-through: both countries import significant amounts of foodstuffs, and since mid-2008 the Kyrgyz som and the Tajik somoni have undergone nominal depreciations (vis-à-vis the dollar) on the order of 25-30%;

- Rising costs for domestic food production: fuel prices (e.g., for tractor fuel) since mid-2008 in both countries have been rising at rates roughly double that of the CPI; and

- Supply constraints, possibly associated with border closures, long-term contracts or elements of monopolization within the food processing supply chain.

On the other hand, these higher food prices do seem to have contributed to the increases in agricultural production reported in both countries during 2009-2010 (despite the drought) and especially 2009. Above normal precipitation levels, as well as some liberalization of the cotton sector in Tajikistan (allowing farmers to grow more food), may also have contributed to this growth.

Be that as it may, food prices in Kyrgyzstan and Tajikistan began to surge again in the third quarter of 2010, under the influence of rising global food prices,[9] as well as of drought in parts of Russia and Kazakhstan.[10] In Kyrgyzstan year-on-year food price inflation accelerated from -1% in June to 19% in October; in Tajikistan, this rate was up to 9% in September. These sharply higher food prices seem likely to exacerbate chronic food security concerns in both countries. WFP's April 2010 *Food Security Update* for Kyrgyzstan found that "the prevalence of food security did not change much between 2006 and the third quarter of 2009: about one third of the population are food insecure, including one fifth severely food insecure." WFP's July 2010 *Emergency Food Security Assessment in Osh and Jalalabad* found that 45% of households in post-conflict Osh city were food insecure. In Tajikistan, accelerating food price inflation rates could put at risk the improvements in food security reported during 2009-2010.[11]

As foodstuffs comprise more than 60% of the consumer price index in both countries, rising food prices clearly have the ability to deepen food insecurity and reduce living standards in vulnerable households. As the data in Table 1 above show, matters are further exacerbated by the sharp increases in household energy, water, and communal service tariffs reported in both countries during 2008-2010. As these increases have typically occurred from very low levels, and since they may help provide much needed improvements in the cash flow of energy and communal service providers, their overall impact on household welfare is not unambiguous. Still, there can be little doubt that higher energy and communal service tariffs are widely perceived in both Kyrgyzstan and Tajikistan as a significant burden for vulnerable households.

Poverty and energy data: What's available? What's missing?

Attempts to improve our understanding of income- and non-income poverty (particularly as concerns food security and access to reliable energy, water, and communal services) in Tajikistan and Kyrgyzstan are constrained by the absence of: (1) internationally comparable income poverty data that are more recent than 2005 (from the World Bank's POVCALNET database[12]); (2) national (i.e., not necessarily internationally comparable) poverty data that are more recent than 2007-2008 (i.e., before the onset of global economic crisis); and (3) data sets and studies quantifying and exploring post-2007 links between income poverty on the one hand,

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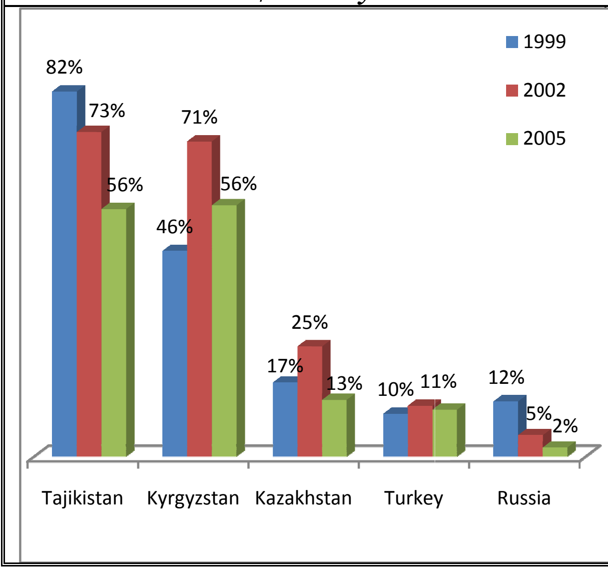
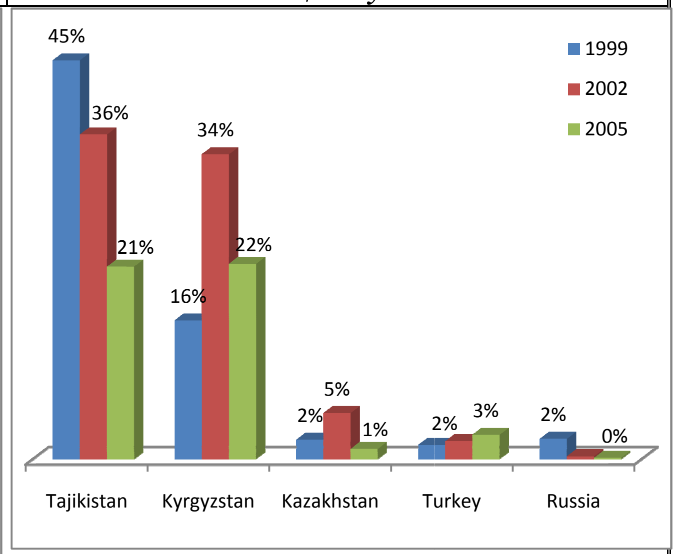
[9] See FAO, *Food Outlook: Global Market Analysis*, November 2010.

[10] See Ben Slay, "Food prices and food security: Gathering storm, or tempest in a teapot?", http://europeandcis.undp.org/senioreconomist/show/8EBA228E-F203-1EE9-B84A4FB728D2B1A1

[11] According to government assessments, the share of household income devoted to food purchases fell from 64% to 58% during this time, with declines noted across all regions (except for Gornyi Badakhshan) and vulnerable groups monitored (Source: *Продовольственная безопасность и бедность*, №2 – 2010, State Statistical Service, page 101). Likewise, the August 2010 issue of WFP's *Food Security Monitoring System* for Tajikistan reported declines in food insecurity for rural households, relative both to July 2009 and February 2010.

[12] This global database (http://go.worldbank.org/NT2A1XUWP0) seeks to provide comparable equivalized absolute and relative income poverty estimates that are based on consumption expenditure data gathered by household budget (or living standards) surveys, and are made comparable by the use of common prices and purchasing-power-parity exchange rates developed under the International Comparison Programme (See http://siteresources.worldbank.org/ICPEXT/Resources/ICP_2011.html).

and falling remittances, higher food and energy prices, and reductions in access to energy, communal, and social services (as well as other vulnerability drivers, like gender, age, family size, rural versus urban location, ethnicity, and the like) on the other.

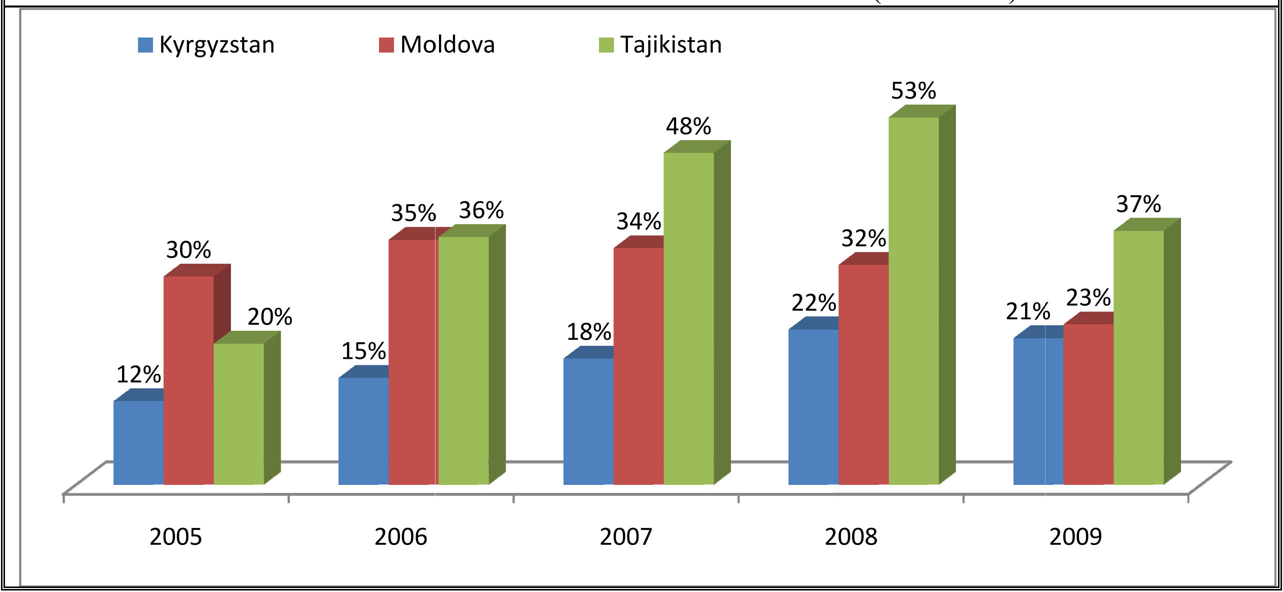
Charts 3, 4—Income poverty rates in Tajikistan, Kyrgyzstan, other countries (1999-2005)	
Share of population living below PPP$2.15/day threshold	***Share of population living below PPP$1/day threshold***
	

Source: World Bank POVCALNET database.

Important insights from "pre-crisis" (i.e., pre-dating the advent and deepening of compound crisis phenomena in 2009) data and literature on poverty and household vulnerability in Tajikistan and Kyrgyzstan include the following. According to the World Bank's POVCALNET database, absolute income poverty rates in these countries rose sharply in the 1990s during the transition recession, and then fell sharply during the decade of recovery growth that came to an end with the global economic crisis in 2009. While income poverty in most transition economies displays similar trends, they are particularly pronounced in Kyrgyzstan and Tajikistan (see Charts 3 and 4 above). The large remittance inflows received by these countries—particularly Tajikistan (see Chart 5 below)—made a major contribution to the rapid pre-2009 growth in household incomes, and therefore to poverty reduction. As labour migration is particularly likely to serve as a coping mechanism for vulnerable households with unskilled workers, remittances as an anti-poverty device may have significant "self-targeting" elements.

Despite this progress, it is noteworthy that, as of 2005, more than a million people in each country were living at or below $1/day (in purchasing-power-parity terms)—the global standard for extreme poverty. The World Bank data indicate that, together with Uzbekistan, these countries accounted for three quarters of those living on less than $1/day in the Europe and Central Asia region in 2005. These data also indicate that, as of 2005, more than half the population in both Tajikistan and Kyrgyzstan were living at or below $2.15/day—the income poverty threshold regarded by the World Bank as most appropriate for the Europe and Central Asia region. It is likewise noteworthy that, as of 2005, 90% of the population in Kyrgyzstan and Tajikistan were living at or below the PPP$4.30/day threshold that the World Bank associated with significant "vulnerability" to poverty. Thus, even factoring in the strong growth in household incomes and consumption recorded during 2006-2008, it is likely that the vast majority of households in Tajikistan and Kyrgyzstan were living below, or close to, internationally determined poverty and vulnerability thresholds, prior to the onset of the global economic crisis.

Chart 5—Remittance inflows as a share of GDP (2005-2009)



Sources: World Bank, IMF, EIU data; UNDP calculations.

Internationally comparable non-income poverty data for Kyrgyzstan and Tajikistan—particularly as concerns access to energy, water, and communal services—are scarce and typically pre-date 2007. The most recent internationally comparable data on access to sanitation services and improved water sources would seem to be from 2004 (see Charts 6 and 7 below); they point to significant levels of deprivation, which typically had not seen much improvement after 1990. By contrast, more conventional non-income poverty measures (e.g., maternal, child mortality rates—see Chart 8 below) place these countries around global averages—although well below rates reported in some lower middle-income CIS countries (e.g., Moldova).

More recent national income poverty data in Tajikistan and Kyrgyzstan are available, but they are not necessarily comparable. Tajikistan's 2010 Poverty Reduction Strategy (PRS) reports that the absolute poverty rate (using the internationally comparable PPP$2.15/day threshold) for that country by 2007 had dropped to 40.9% (40.3% in urban areas, 41.1% in rural areas), from 56% in 2005. Under the national poverty definition (which defines absolute income poverty in terms of "the value of basic household needs"), the absolute income poverty rate in 2007 had fallen to 53.5%, from 72.4% in 2003. The IMF-World Bank Joint Staff Advisory Note to the

PRS states that "about 1 million people escaped absolute poverty between 2003 and 2007. The incidence of extreme poverty declined from 42 percent in 2003 to 17 percent in 2007. The decline in extreme poverty has been more rapid in rural areas. However, 75 percent of the poor in 2007 lived in rural areas (as did 71 percent of the extreme poor)."[13]

Chart 6—Share of population without access to improved sanitation services

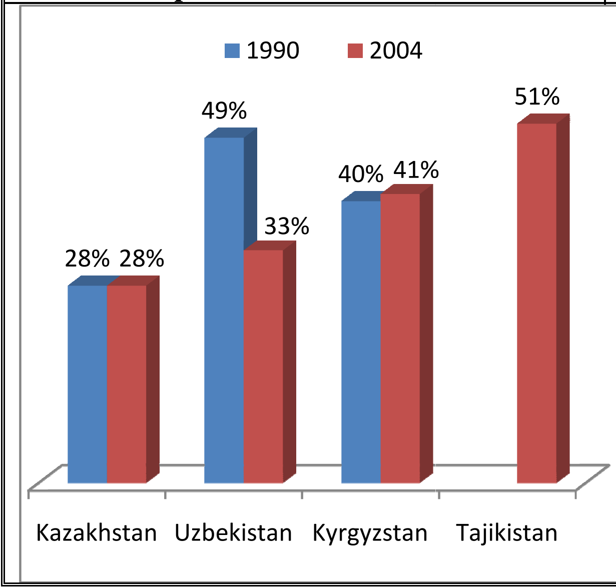
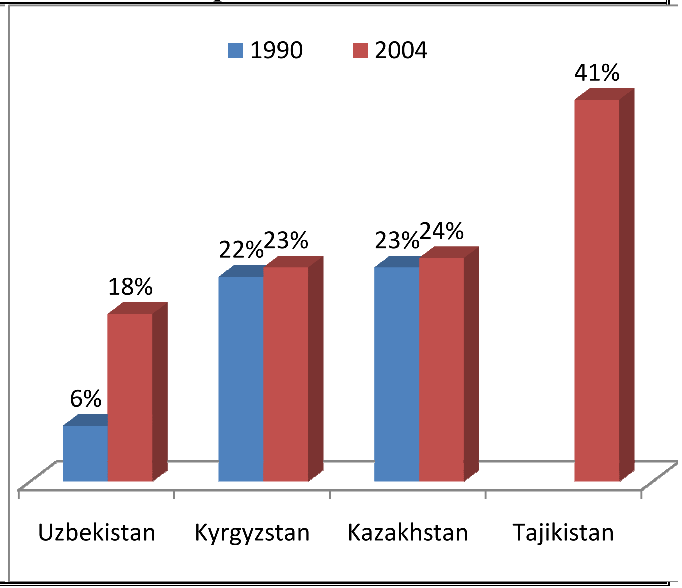


Chart 7—Share of population without access to improved water sources



Source: UNDP Human Development Report 2006, pp. 306-307.

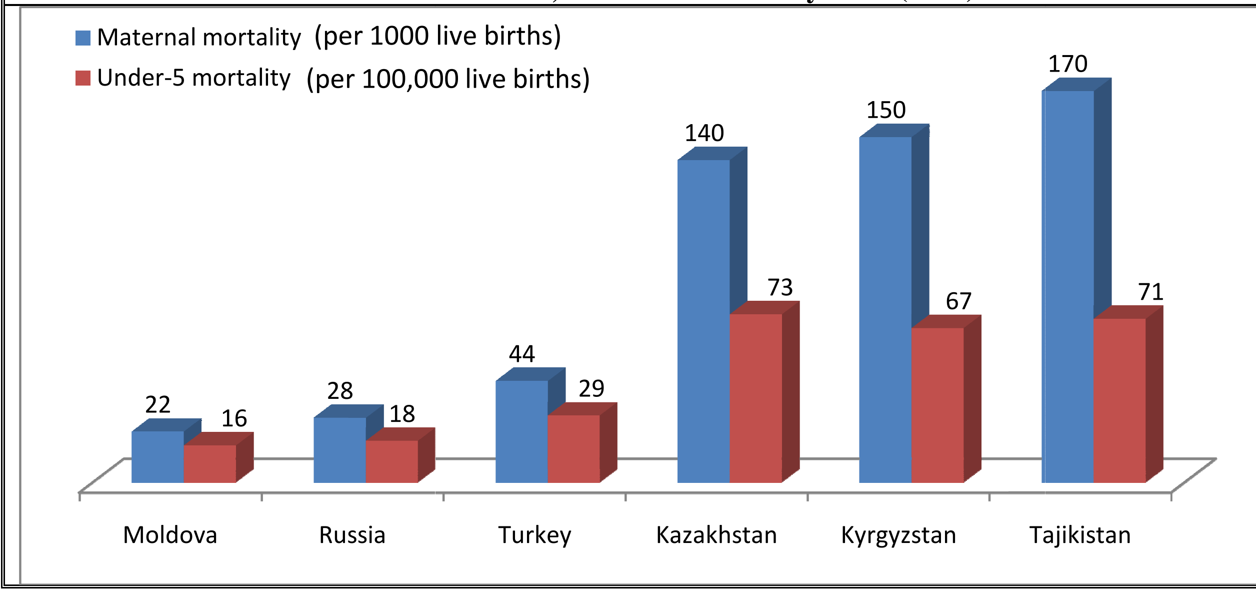
On the other hand, the data in Table 2 below indicate that, while income poverty rates in Tajikistan are higher in rural than in urban areas, extreme poverty may actually be a greater problem in urban areas. They also suggest that poverty in Dushanbe may be worse than in the sparsely populated mountainous Gorno Badakhshan region. And they suggest that poverty rates in the industrial Sughd region (in northern Tajikistan, bordering with Uzbekistan and Kyrgyzstan) are well above national averages. These results seem a bit counter-intuitive.

The 2007 Living Standards Survey[14] authored by the State Statistical Office and UNICEF (on the basis of World Bank data) provides additional information about non-income poverty in Tajikistan immediately before the winter crisis. It found that 81% of the population—including 76% of those classified as non-poor and close to half of the urban population—relied on solid fuels for heating and cooking, even before the 2007-2008 winter crisis. By contrast, only 5% had central heating in their dwelling According to this study According to this study, piped gas was supplied to only 18% of the population (17% in urban areas, and 6% of those classified as non-poor). Only 59% of the population had access to improved water facilities (83% in urban areas,

[13] Source: *Poverty Reduction Strategy Paper of the Republic of Tajikistan for 2010-2012*, p. 3.
[14] *Tajikistan Living Standards Measurement Survey 2007: Indicators at a Glance*, 2009.

and 43% of those classified as non-poor), while only 15% had access to improved sanitation facilities[15] (48% in urban areas, and 19% of those classified as non-poor).

Chart 8—Maternal, under-five mortality rates (2005)



Source: UNDP Human Development Report 2007-2008, pp. 262-263.

Trends in national absolute income poverty data for Kyrgyzstan (which are calculated on the basis of the annual subsistence minimum, expressed in nominal soms) are shown in Table 3 below. They likewise show poverty reduction continuing through 2008; and while the overall income poverty rate apparently remained constant at 31.7% in 2009, a sharp decline in the extreme poverty rate was reported for that year (from 6.1% to 3.1%). As in Tajikistan, the vast bulk (76% in 2009) of those judged to be in poverty live in rural areas. These national trends come with some surprising regional variation: poverty rates in 2008 were reported up in much of northern Kyrgyzstan, including especially Bishkek city, and the Chui, Talas, and Issyk-Kul regions. By contrast, poverty rates in 2009 rose in the southern regions of Batken and Osh—perhaps because of these regions' reliance on remittances. Due to relatively their large populations and below-average household income levels, about a quarter of Kyrgyzstan's poor in 2008 lived in Osh, and another 19% lived in Jalalabad.

Age-disaggregated income poverty data underscore the continued importance of child poverty in Kyrgyzstan. For example, a recent World Bank report finds that:[16]

- 52% of the under-18 year-olds and 58% of the under-6 year-olds were living in poverty in 2005;

[15] Classified as flush or poor/flush plumbing, or a latrine, connected to piped sewer or septic systems.
[16] On the basis of household budget survey data. Source: *Social Safety Net in the Kyrgyz Republic: Capitalizing on Achievements and Addressing New Challenges*, World Bank, 20 May 2009, p. 7.

- 15% of the under-18 year-olds and 19% of the under-6 year-olds were living in extreme poverty in 2005; and
- 70% of those living in poverty in that year were members of households with three or more children.

Table 2—Absolute income poverty rates in Tajikistan, 2007		
Region	***Poverty rate***	***Extreme poverty rate***
National	53.5%	17.1%
- Urban	49.4%	18.9%
- Rural	55.0%	16.4%
Dushanbe	43.3%	16.4%
Gorno Badakhshan	43.4%	9.9%
Khatlon	47.3%	8.2%
Regions of Republican Subordination[17]	48.8%	14.1%
Sughd	68.8%	31.1%

Source: "Poverty Reduction Strategy Paper of the Republic of Tajikistan foe 2010-2012", Dushanbe, 2010, pp. 6-8.

While very important, these data and analyses provide a less than complete guide to recent (post-2008) trends in poverty and vulnerability in Tajikistan and Kyrgyzstan. Some trends can be gleaned from macroeconomic and fiscal data—particularly in Kyrgyzstan, where (as pointed out above) a 2.6% decline in final consumption has been officially reported for 2009. In per-capita terms, this decline would have been even larger—although not as large as the reductions recorded in most other CIS countries. Kyrgyzstan's relatively small decline would seem to have resulted from two factors: the relative stability in remittance inflows (compared to the falls in other CIS countries—please see Chart 5 above); and fiscal policy. Official data show that the share of GDP devoted to consolidated budget spending rose from 24% in 2008 to 29% in 2009, thanks to growth in tax revenues collected (from 25% of GDP in 2008 to 28% in 2009) and a large increase in budget support (from 1% of GDP in 2008 to 5% in 2009) from donors (chiefly the Russian Federation). This allowed the government to increase social insurance and protection spending by some 12% (in real terms) in 2009, helping to limit the decline in household welfare.

Although comparable fiscal data are not available for Tajikistan, the apparent continuation of GDP growth through 2009 suggests that sharp increases in income poverty were probably averted last year. The PRS states that a 1 percentage point increase in per-capita GDP corresponds to a reduction in Tajikistan's poverty rate of 0.62 percentage points. "Taking into account that the GDP per capita growth was 6.7 percent in 2009 compared to 2007, the poverty rate was reduced by 4.2 percent and was equal to 49.3 percent."[18] Moreover, the expansion of the

[17] This is the broader region to which Dushanbe city belongs. It includes also Tursunzode (where the Tajikistan Aluminum Company—the country's largest industrial enterprise—is located), and the headwaters of the Vakhsh river, where the hydropower plants that generate more than 90% of Tajikistan's electricity are located.
[18] Source: *Poverty Reduction Strategy Paper of the Republic of Tajikistan for 2010-2012*, Dushanbe, 2010, p. 8.

current account deficit (to -3.9% of GDP, from a surplus of 0.9% in 2008) suggests that domestic spending was able to grow faster than GDP in 2009. On the other hand, the 31% decline in remittance inflows recorded in 2009 suggests that household consumption—particularly on a per-capita basis, among vulnerable households—did not grow much (if at all) in 2009.[19]

Table 3—Trends in absolute poverty rates in Kyrgyzstan, 2006-2009

	Poverty rates				***Extreme poverty rates***			
Region	***2006***	***2007***	***2008***	***2009***	***2006***	***2007***	***2008***	***2009***
National	39.9%	35.0%	31.7%	31.7%	9.1%	6.6%	6.1%	3.1%
- Urban	26.7%	23.2%	22.6%	21.9%	5.5%	3.2%	3.2%	2.7%
- Rural	47.7%	41.7%	36.8%	37.1%	11.3%	8.5%	7.7%	3.3%
Batken region	50.9%	40.4%	20.7%	31.5%	16.1%	9.2%	3.9%	6.0%
Jalalabad region	58.3%	53.0%	40.1%	36.9%	17.3%	12.0%	9.8%	0.5%
Issyk-Kul region	43.9%	38.6%	52.2%	46.1%	10.6%	8.1%	16.9%	6.6%
Naryn region	49.3%	45.2%	42.7%	44.1%	15.1%	12.8%	11.6%	10.0%
Osh region	52.1%	46.6%	37.5%	38.3%	7.6%	6.4%	4.5%	2.0%
Talas region	40.0%	35.3%	43.0%	33.0%	9.7%	7.9%	4.6%	2.9%
Chui region	20.1%	15.0%	15.8%	21.2%	3.8%	1.4%	2.1%	2.4%
Bishkek city	5.5%	5.0%	15.2%	13.2%	0.4%	0.6%	2.1%	3.3%

Source: State Statistical Committee, Bishkek, 2009, 2010.

In any case, compound crisis phenomena began taking hold in Tajikistan and Kyrgyzstan during 2007-2008, when strong GDP growth was being reported and overall income poverty rates continued to drop. This reminds us that—while very important—national accounts data are an imperfect guide to trends affecting vulnerable households in Central Asia's low-income countries.

Recent research on poverty, energy, and vulnerability in Kyrgyzstan and Tajikistan

Fortunately, recent months have seen the emergence of new research on to these issues, shedding light on trends that have appeared since Tajikistan's winter energy crisis of 2007-2008 on links between income poverty, food and energy price trends, remittances, and access to energy, water, communal and social services. This research includes:

- The World Bank's *Social Safety Net in the Kyrgyz Republic: Capitalizing on Achievements and Addressing New Challenges*, issued in May 2009;
- UNICEF-Kyrgyzstan's *National Report on Child Poverty and Disparities*, issued in April 2010;

[19] The IMF finds that "real GDP growth remained positive at an estimated 3.4% in 2009, [but] disposable incomes declined—an issue of particular concern given Tajikistan's high incidence of poverty". (Source: "Tajikistan Program Note", 15 June 2010, available at http://www.imf.org/external/np/country/notes/tajikistan.htm.

- The DFID-funded study *The Impact of the Global Economic Crisis on Households in Tajikistan: Sociological Research Results*,[20] authored by the Panorama public foundation and released in Dushanbe in February 2009; and

- USAID-funded studies on *The Curtailment of Electricity Consumption: The Attitude of the Population and the Impact on the Quality of Life* (November 2009) and *Kyrgyzstan Household Energy Analysis and Proposed Social Protection Measures* (November 2008), written by PA Consulting and published in Bishkek.

The "Panorama" report is based on data collected from a survey administered to 1500 households in Tajikistan in November 2009, combined with the results of 24 focus group discussions. A second phase of this research is to be conducted in late 2010 (presumably, in comparison to the 2009 baseline). The most interesting results include the following points:

The Panorama survey data indicate that remittances are the largest income source for 25% of Tajikistan's households (30% of rural households). Every third household in Tajikistan receives labour remittances (40% in rural areas, 20% in urban areas), and has at least one member who is working abroad. The largest shares of households receiving labour remittances were highest in Gorno Badakhshan (42%) and in the RRS (41%). In terms of reductions in remittance incomes, the crisis has had a particularly large impact on female-headed households—presumably because many male spouses are working abroad as labour migrants.[21]

Fears of massive crisis-related returns of unemployed migrants to Tajikistan seem not to have been born out. While 44% of households indicated that labour migrants within their household were forced to return home during the September 2008 – September 2009 period, 14% were able to go back to their destination countries (chiefly Russia). This would put the number of returned migrants who remained at home at approximately 30% of the total. While these figures would mean that hundreds of thousands of (primarily) young unemployed men remained in Tajikistan as a result of the crisis, they would also be less than what was anticipated when the crisis was unfolding in 2009. It is also interesting to note that the 30% reduction in the numbers of labour migrants that the survey found to be going abroad during September 2008 – September 2009 dovetails closely with the 35% reduction in remittance inflows into Tajikistan reported by the IMF during this time.

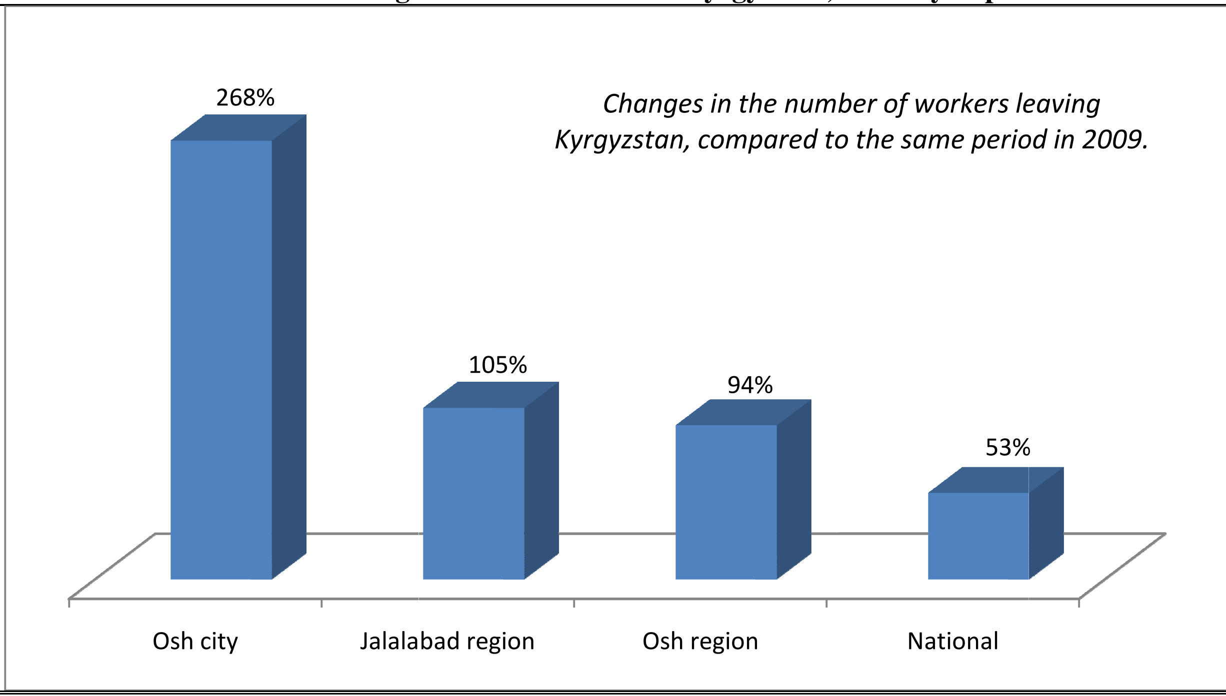
These data suggest a close correspondence between labour migration and remittances in Tajikistan—as opposed to Armenia, for example, where inflows from the diaspora accounts for a significant share of remittance incomes. They also suggest that—despite the crisis—dollar incomes remitted per migrant worker remained relatively constant during this time. If so, then the 22% growth in remittance inflows recorded during January-September 2010 (relative to the first nine months of 2009) would also correspond to significant reductions in the numbers of "redundant" migrant workers in Tajikistan. A similar pattern would seem to be present in Kyrgyzstan, where official data indicate that the 15% decline in remittance inflows reported for

[20] "Влияние глобального экономического кризиса на домохозяйства в Республике Таджикистан (по результатам социологического исследования)"

[21] Perhaps for this reason, income poverty rates among female-headed households during the past decade have been lower than in male-headed households.

2009 corresponds to a 19% reduction in the number of migrant workers going abroad. By contrast, the 30% increase in remittances reported through the first nine months of 2010 corresponds to a whopping 53% increase in the number of migrant workers leaving Kyrgyzstan. As the data in Chart 9 below show, rates of out-migration from Kyrgyzstan's southern regions (the epicenter of the June 2010 ethnic violence) were significantly above the national average.

Chart 9—Labour outmigration from southern Kyrgyzstan, January-September 2010



Source: State Statistical Committee, UNDP calculations.

The Panorama data suggest that, despite its socio-economic importance, migration in Tajikistan rarely involves more than one migrant per household. Only about a quarter of respondent households (or 8% of total households) send more than one member abroad to work. This pattern would seem to correspond to a certain intra-household division of gender roles, whereby men go abroad and women remain at home. This contrasts, for example, with Moldova, where an International Organization of Migration study found that 42% of Moldova's migrants in 2006 were women. Such a figure suggests that both parents are working abroad in significant numbers of Moldovan households. The strains on families and children that are sometimes associated with migration may therefore be less in Tajikistan than in Moldova.[22]

The Panorama research also suggests that, while not as important as migration abroad, internal labour migration also serves as a significant coping mechanism. These data indicate that

[22] For more on these issues in Moldova, see Mihail Peleah, "The Impact of Migration on Gender Roles in Moldova", *Development and Transition*, no. 8, 2007 (http://www.developmentandtransition.net/index.cfm?module=ActiveWeb&page=WebPage&DocumentID=664).

workers from every fourth rural household and every sixth urban household seek and gain employment in Dushanbe and other cities (different from their original place of residence). Informal-sector self-employment likewise continues to be an important coping mechanism: activities like sewing, embroidering, baking, and small-scale artisanry (typically conducted by women) are reported in every fourth urban household. In Dushanbe, nearly 40% of respondent households indicated engagement in these activities.

The Panorama data note a doubling of the numbers of households with incomes described as insufficient to purchase basic foodstuffs, as well as households unable to procure consumer durables and other more expensive purchases. Over 70% of households surveyed indicated that they typically buy only the cheapest foodstuffs available, and rarely eat meat. These data also suggest that household food production—either for own consumption or for cash sale—is not a panacea: only 7% of rural households indicated that income from cultivating their own farms was their primary income source. Moreover, 69% of the surveyed households receiving incomes from the sale of agricultural produce reported significant reductions in these earnings during the September 2008 – September 2009 period. Perhaps for this reason, only 12% of the surveyed households (and only 14% in rural areas) have responded to the crisis by deciding to grow their own food. Difficulties in obtaining and managing land and other inputs on dehkhan farms[23] may be responsible for this: only 21% of rural households indicated that dehkhan farming provided significant incomes. These data suggest that, despite recent movement in the direction of deregulating the agricultural sector, additional land and agricultural reforms may be needed if land cultivation is to significantly increase food security in rural areas.

The November 2009 USAID-funded study focuses on the impact of the winter energy crisis on living standards in Kyrgyzstan. Although based on focus groups (and therefore not necessarily applying representative sampling techniques,[24]) this study offers some important insights into these issues, including the following:

Many of these respondents reported interruptions in electricity supplies even prior to the rationing introduced during the winters of 2008-2009 and 2009-2010. Although not necessarily based on a representative sample of the broader population, this finding suggests that—in Kyrgyzstan (as in Tajikistan)—universal household access to uninterrupted year-round electricity supplies had been lost (or had never been achieved) even before the "compound crisis" took hold.[25] Respondents pointed to poor management in the electricity sector,

[23] Although most land in Tajikistan remains state-owned, rural households are able to rent small land parcels from collective and state farms. In addition to growing cotton on these plots (often times under compulsory circumstances reminiscent of Soviet central planning and agricultural exploitation), rural households use these parcels in order to grow food and tend livestock. These small-scale household agricultural activities, which also bear a certain resemblance to share-cropping, are referred to as dehkhan farms.

[24] The November 2009 study was based on interviews conducted earlier in December 2008 with 73 respondents (45 men, 28 women) in Chui, Jalalabad, Osh, and Talas oblasts, for whom electricity was the main energy source (i.e., for heating and cooking). All respondents were either household heads or, if not, were managing the household budget. The sample was in turn stratified into two groups of respondents—those who regularly pay their electricity bills, and those who don't.

[25] "The electricity was cut off without warning, and it was sometimes off for the whole day. The main reasons for previous cut-offs, according to the respondents, were accidental failures of the electric system." Source: *The Curtailment of Electricity Consumption: The Attitude of the Population and the Impact on the Quality of Life*, USAID, Bishkek, November 2009, p. 4.

corruption,[26] and excessive electricity exports, as the main causes of these shortfalls. They also indicated that the quality and quantity of official information regarding the causes of the energy shortages were inadequate. In response, "The respondents would like to receive official information from the managers . . . and government officials by the means of live television broadcasting and at general meetings in their settlements" (p. 7).

Predictably, the surveyed households responded to these reductions in electricity supplies, and to higher energy prices,[27] by reducing electricity usage (e.g., less frequent use of appliances,[28] installation of makeshift weather stripping) and by increasing purchases of substitute fuels (e.g., coal,[29] firewood, dung).[30] Increases in hours worked (to raise household incomes to cover higher energy costs) were also reported. Reductions in purchases of food, clothing, health and education services, and other essentials in response to higher electricity tariffs were a common coping mechanism. These survey data indicate that the significance of the income effect associated with higher energy prices is greater than what is suggested in the official consumption expenditure data, according to which spending on energy, housing, and communal services during 2007-2008 averaged no more than 6% of total household budgets.[31]

The USAID-funded study on *Kyrgyzstan Household Energy Analysis and Proposed Social Protection Measures* (November 2008), and the World Bank's May 2009 *Social Safety Net in the Kyrgyz Republic: Capitalizing on Achievements and Addressing New Challenges*, are based on household budget survey data, and focus on linkages between energy tariffs/prices, consumption patterns, poverty, and social policy. Both focus extensively on arguments for moving away from categorical benefits and subsidies—both for energy and in general—in favour of the unified monthly benefit (UMB—Kyrgyzstan's only means-tested social protection instrument, paid to families with children). The USAID study also focused on the implications of the significant energy tariff increases which were subsequently introduced in January 2010. This study argued (correctly, in hindsight) that, in the absence of: (i) improved management within

[26] Reference here is to corruption among both the companies and households, some of which (according to respondents) resort to bribing meter readers in order to lower their reported electricity consumption (and therefore expenses). Incidents of illegal electricity connections—often with significant attendant health risks—were also reported.
[27] As the data in Table 1 indicate, residential electricity tariffs had been rising steeply for the two years prior to the 1 January 2010 tariff doubling that helped precipitate the April 2010 events. Whereas annual consumer price inflation in Kyrgyzstan during 2005-2009 averaged 10%, annual increases in prices paid by households for electricity, heat, gas, and other fuels averaged 16% during this time.
[28] Respondents reported no use of refrigerators, or personal computers, during the winter. By contrast, virtually no changes in use of television sets and incandescent lights were reported.
[29] The role of coal in meeting national and household energy needs seems to have risen sharply since this time. According to official data, annual coal production in Kyrgyzstan nearly doubled during 2006-2009, rising from 321,000 tons to 615,000 tons in this time. At the same time, imports from Kazakhstan continue to meet a large share of Kyrgyzstan's coal demand. The emissions consequences of burning Kyrgyzstan's high-sulfur coal, the non-trivial role of child labour in the coal sector, and perennial dangers from mine safety issues, suggest that these improvements in energy security could be something of a mixed blessing.
[30] These options were typically not available to urban residents, living in apartment blocks and relying on central heating and electricity. Few respondents reported use of generators, which were viewed as expensive, inconvenient, and unreliable.
[31] By contrast, the official data indicate that 53-55% of household expenditures were devoted to food consumption during 2007-2008.

the energy sector (particularly to reduce extensive theft and losses);[32] (ii) the credible threat of disconnection for non-payment; (iii) effective public communications concerning the need for, and low-cost options for responding to, higher tariffs; and (iv) consumer acceptance of the higher tariffs (*inter alia* in the form of growing arrears that reduced collection and broadened the wedge between nominal and effective tariffs), higher energy tariffs are likely to be ineffective.

Prior to 2006, Kyrgyzstan's social protection system was based on 38 types of categorical benefits ("privileges") for 33 classes of beneficiaries. In addition to energy and communal services, these benefits covered housing, transport, communications, health care, vacations, and other municipal services. Beneficiaries were eligible for 100%, 50%, or 25% price discounts up to certain administratively determined consumption levels. The difference between market prices/tariff levels and the out-of-pocket costs actually paid by beneficiaries was covered by the central government.

The USAID report indicates that some 23% of households in Kyrgyzstan in 2008 (about 320,000 people) were recipients of various categorical benefits. Around 20% of households received energy subsidies (or discounts for privileged consumers), which were not means-tested. These accounted for 54% of all subsidies; electricity subsidies in turn accounted for 60% of this figure, or some 30% of total categorical benefits. Some 55% of Kyrgyzstan's population received electricity subsidies, in the form of discounts for privileged consumers or additional payments for pensioners. While most of these categorical benefits have been delivered in kind, the government since 2006 has sought to gradually monetize them. The steep tariff increases for electricity, heat, water, and some other communal services introduced in January 2010 reflected the desire to further monetize these benefits (in principle, leaving their after-subsidy prices more-or-less unchanged), as well as an attempt at raising prices *per se*. Since most of these monetized benefits have remained in place even after the April 2010 tariff rollbacks, the monetization of these categorical energy (and other) benefits) may now be large complete.[33]

The USAID study finds that only 6% of categorical (energy and other) benefits went to extremely poor households in 2005; 64% went to non-poor households. The mis-targeting for urban households was even more extreme: 5% of these benefits went to extremely poor households, while 77% went to non-poor households. In terms of energy subsidies, the May 2009 World Bank study is slightly less damning, finding that only 16% of housing and utility subsidies (most of which were for energy) went to households in the poorest quintile of the income distribution. The USAID study likewise found that:

- 92% of households receiving gas subsidies are non-poor;
- 88% of households receiving heating subsidies are non-poor; and
- 60% of households receiving electricity subsidies are non-poor.

[32] The 2008 USAID study reports losses in distribution companies in the range of 31-44%, as of 2007. A 2010 USAID report notes significant reductions in losses (to around 25%) during 2008-2009, but questions the accuracy of these data and the sustainability of the trend they portray. The 2010 report also states that losses in the 7-10% range are a "standard benchmark" in other countries. Source: *Electricity Loss Reduction Strategy for the Kyrgyz Power Sector*, USAID, Bishkek, 25 March 2010 (revised 30 April 2010), pp. 11, 13.

[33] By contrast, the 2008 USAID study reports that only 33% of categorical energy benefits had been modified as of that year.

This outcome reflects the fact that fuel use is stratified by income levels and location (rural versus urban). The USAID studies reports that 95-98% of rural households, and 65% of poor urban households, were heating with solid fuels in 2005. Solid fuels were also used for cooking in a majority of rural households, and in some 40% of poor urban households. Prior to the winter energy crises of 2008-2009 and 2009-2010, the remainder of Kyrgyzstan's households relied on central and district heating (in urban areas),[34] and on electric heat. Gas, like central and district heating, was only an option for urban households;[35] the USAID study reports that gas for heating was only available to 6% of the rural population in 2005. However, 23% of households (primarily in urban areas) were using gas for cooking in 2005; gas penetration had pushed the share of urban non-poor households using electricity for cooking below 40%. Since then, however, sharp increases in wholesale and retail gas prices and disputes with UzbektransGaz (the monopoly supplier) have reduced the attractiveness of gas for many users in Kyrgyzstan.[36]

These data suggest that only about a third of poor urban households, and only 20% of rural households, were relying on electricity for heat in 2005. However, electricity use for heat (and cooking) seems much more prevalent among—and therefore electricity tariff increases a greater burden for—poor households. The 2008 USAID study notes that "it is the urban poor and extremely poor that use electricity for heating the most", and that "there has been a dramatic increase in electricity heating in the last 5-7 years". It also finds that "if a poor household has no other option but [to] use electric heat, its share of expenditures on electricity will climb up to 15-22% of the total expenditures".[37] In effect, electricity in Kyrgyzstan has certain "inferior good" properties, in that poorer households are more reliant on electricity for heat and cooking than are wealthier households. Among other things, this characteristic would reduce the effectiveness of "bloc" or "lifeline" electricity tariffs (under which tariffs rise with greater amounts of electricity consumption) in mitigating the impact of higher tariffs on low-income households. On the other hand, if tariffs were to remain low, then block tariffs could be an effective mechanism for targeting low-income households facing energy poverty concerns.

[34] "Central heating is available in principle to around 13-14% of the Republic's households, and is an urban phenomenon concentrated in and around Bishkek, Osh, and Jalalabad. There has been a steady decline in use of central heating among all urban income groups since 1999. Drop in urban demand for central heating by the extremely poor has been particularly dramatic, and we presume that switching to electricity was the alternative." Source: *Kyrgyzstan Household Energy Analysis and Proposed Social Protection Measures*, USAID, Bishkek, November 2008, p. 4.
[35] "57% of all gas consumers reside in Bishkek" (in 2005), *ibid.*.
[36] Whereas Kyrgyzstan imported gas from Uzbekistan at $100/1000m^3 in 2007, the 2010 price has apparently been set at $220/1000m^3. This is roughly in the middle range of world gas prices, which during January-May 2010 ranged from $170/1000m^3 in the US to $281/1000m^3 for Gazprom's exports to Western Europe. (Source: IMF commodity price data, http://www.imf.org/external/np/res/commod/index.asp.)
[37] By contrast, poor households with access to other heating sources were able to keep their electricity expenditures down to 3-5% of total incomes. Non-poor urban households pushed expenditures on electricity down to 2% (or less) of total incomes. Source: *op cit.*, pp. 5, 7.

Table 4—Kyrgyzstan's social protection instruments: Efficiency and effectiveness (2005 data)				
	Universal monthly benefit	***Monthly social benefit***	***Categorical benefits***[38]	***Pensions***[39]
Share of GDP[40]	0.53%	0.21%	0.6%	5.1%
Coverage of poorest quintile	28%	13%	16%	56%
Targeting accuracy[41]	38%	33%	13%	29%
Benefit generosity[42]	7%	8%	1%	25%
Poverty impact:[43]				
• Poverty	12%	6%	1%	48%
• Extreme poverty	3%	6%	1%	33%
Cost efficiency:[44]				
• Poverty	2	3	6	3
• Extreme poverty	5	6	27	10

Source: Social Safety Net in the Kyrgyz Republic: Capitalizing on Achievements and Addressing New Challenges, World Bank, May 2009, p. 11.

Both studies argue that the UMB is more effective in supporting poor households than categorical subsidies, both for energy and in general. According to World Bank calculations, 28% of households in the poorest quintile received the UMB in 2005, while only 16% received categorical benefits (see Table 4 above). These data also indicate that it only takes 2 som of budget spending to reduce the poverty gap[45] by 1 som (or 5 som of budget spending to reduce the extreme poverty gap by 1 som), compared to 6 and 27 som, respectively, of budget spending via categorical benefits. The UMB would therefore seem to be a more efficient instrument, in terms of poverty-reduction impact per som of budget spending, than categorical benefits.

Such comparisons explain why the government has sought (and donors have encouraged) the monetization of categorical benefits in general, and for energy in particular. They also suggest that social policy makers should seek to increase both the size of the monthly UMB payments and number of UMB recipients.

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[38] Except for "share of GDP", all data refer to categorical housing and utilities (including energy) subsidies.
[39] Old age, disability, survivor pensions.
[40] 2007 data.
[41] Share of benefits captured by poorest quintile.
[42] Ratio of benefit to estimated beneficiaries' consumption expenditures.
[43] Relative reduction in the (extreme) poverty gap.
[44] Nominal cost (to the state budget) of reducing the (extreme) poverty gap by one som.
[45] The poverty gap is defined as the mean shortfall of the total population from the poverty line (where the non-poor have zero shortfall), expressed as a percentage of the poverty line. This measure, which reflects the depth of poverty as well as its incidence, can be described as a measure of the per-capita resources needed to eliminate poverty (or reduce the poor's shortfall from the poverty line to zero) via perfectly targeted cash transfers.

Table 5—Social policy instruments in Kyrgyzstan (2007-2009)			
	2007	***2008***	***2009***
Pensions (overall):			
• Number of recipients	524,000	529,000	569,000
• Average monthly pension (som)	906	1120	1460
Old age pensions:			
• Number of recipients	369,000	373,000	412,000
• Average monthly pension (som)	987	1223	1567
Disability pensions:			
• Number of recipients	67,000	70,000	72,000
• Average monthly pension (som)	691	845	1082
Survivors' pensions:			
• Number of recipients	88,000	86,000	85,000
• Average monthly pension (som)	320	469	576
Real growth in monthly pension (annual average)	11%	3%	9%
Social fund balance (share of GDP)	0.6%	0.7%	n.a.
Universal monthly benefit:			
• Number of recipients	475,000	434,000	362,000
• Average monthly payment (som)	125	120	135
• Real annual growth (deflated by CPI)	n.a.	-23%	5%
Monthly social benefit:[46]			
• Number of recipients	57,000	59,000	61,000
• Average monthly payment (som)	461	656	715
• Real annual growth (deflated by CPI)	n.a.	14%	2%
Relative to national monthly subsistence minimum:			
• Pension	32%	31%	45%
• Unified monthly benefit	4%	3%	4%
• Monthly social benefit	16%	18%	22%

Sources: State Statistical Committee data; UNDP calculations.

However, as the data in Table 5 show, the opposite has been occurring: between 2007 and 2009 the number of UMB recipients dropped by nearly a quarter (from 475,000 to 362,000).[47] When deflated by consumer price inflation, the UMB's value dropped by 23% in 2008, before recovering slightly (up 5% in 2009). As a result, the average monthly UMB payment in 2008 was only 3-4% of the national minimum subsistence level. This reflects the fact that, as the World Bank points out, "the UMB is a last resort program that complements a

[46] The benefit is provided without means-testing, mostly to beneficiaries whose health or physical disabilities prevent them from working,

[47] UNICEF reports that, as of 2007 (before these declines in UMB recipients began), these benefits were only received by 8% of Kyrgyzstan's households. Despite the country's high poverty rate, less than 15% of Kyrgyzstan's children were living in households that were receiving UMB assistance. Source: UNICEF-Kyrgyzstan *National Report on Child Poverty and Disparities*, April 2010, p. 54.

number of other, some of which are more generous, social protection programs, most notably pensions".[48] Moreover, the vast majority of UMB recipients—84% as of April 2010—are concentrated in the poorer southern regions of Osh, Jalalabad, and Batken. This would mean that only 16% of UMB recipients were in Kyrgyzstan's northern regions—where urbanization rates are higher, temperatures are colder, and heating needs greater.

If the UMB is to mitigate the effects of higher energy prices on vulnerable households, resources would need to be found to finance substantial increases in both the monthly benefits paid out under the UMB, and the number of UMB recipients. This may have happened in 2010: the monetization of categorical benefits that accompanied the sharp increases in electricity and heat tariffs introduced in January caused social protection payments financed from the central budget to more than double during January-August 2010 (to 1.1 billion som, compared to the 500 million som allocated to these benefits during the first eight months of 2009). While some of this was due to increases in UMB payments, increases in other forms of social support would seem to have played a larger role.[49] This may reflect the UMB's relatively poor coverage coverage in the north—where colder temperatures and longer winters increase the demand for energy, and where the need for increased social protection in response to the higher energy and heat tariffs was arguably greater.

A comparison of the UMB vis-à-vis pension benefits in Kyrgyzstan also suggests some interesting insights. As the World Bank data in Table 4 above show, pensions are twice as effective as the UMB in reaching households in the poorest quintile (56% of these households received pension incomes in 2005, compared to 28% for the UMB); and while not as accurate in targeting these households (29% targeting accuracy for pensions, compared to 38% for the UMB), pensions are more generous than the UMB, comprising 25% of incomes (compared to 7% for the UMB) in households receiving these benefits. As a result, the overall impact of pensions in reducing the poverty gap in 2005 was four times greater than the UMB's (48% versus 12%), and ten times greater in terms of reducing the extreme poverty gap (33% versus 3%). The UNICEF 2010 child poverty study further underscores the importance of pensions ikn poverty reduction, noting that children are much less likely to live in poverty when at least one household member is receiving a pension.[50]

Of course, the pension system's greater apparent effectiveness is due largely to the fact that the fiscal resources devoted to pensions exceed those devoted to the UMB by an order of magnitude (5.1% of GDP for pensions, versus 0.53% of GDP for the UMB). Still, the World Bank data indicate that pensions' efficiency as a poverty-reduction instrument is not noticeably worse than the UMB's efficiency: whereas it took 2 som of universal monthly benefits to reduce the poverty gap by one som in 2005, it only took 3 som to achieve this same result via pension

[48] Source: *Social Safety Net in the Kyrgyz Republic: Capitalizing on Achievements and Addressing New Challenges,* World Bank, May 2009, p. 10.

[49] These took the form of increases in the average pension level (by 24%) and the MSB (by about 81%). Public sector wages were also increased in 2010, by 200 som per month.

[50] According to this research, the poverty rate for children in Kyrgyzstan in households receiving pension benefits in 2007 was only 43%, while in households without pension benefits the child poverty rate was 56%. For extreme poverty, these figures were 8% and 27%, respectively. Source: UNICEF-Kyrgyzstan, *National Report on Child Poverty and Disparities*, April 2010, p. 54.

benefits.[51] Moreover, while the numbers of UMB recipients dropped by nearly a quarter and the real value of UMB payments collapsed during 2007-2009, the number of pensioners increased from 524,000 to 569,000 (a 9% increase), while the average monthly pension payment grew significantly in real terms during (see Table 5). The official data show that Kyrgyzstan's social fund was consistently in surplus during the 2004-2008 period, which could be interpreted to mean that fiscal sustainability concerns need not be an issue. However, 2 billion som (about 1% of GDP) were apparently transferred from the state budget to the social fund in 2009; the 2010 budget calls for this transfer to rise to 5 billion som. Transfers on this scale may not be fiscally sustainable, in the longer term.

References to the monthly social benefit (MSB), which is provided without means-testing mostly to beneficiaries whose health or physical disabilities prevent them from working, are often encountered in descriptions of social policy in Kyrgyzstan. MSB payments were increased in January 2010, to mitigate the social impact of the higher energy tariffs then introduced. However, in light of the MSB's rather specific nature and the relatively small numbers of MSB recipients (see Table 5), its ability to reach vulnerable households facing threats to energy security is necessarily limited.[52] These constraints are apparent in the relatively small share of GDP devoted to the MSB, and its relatively small coverage of Kyrgyzstan's poorest households. However, the data in Table 4 indicate that the MSB is relatively cost-effective in terms of reducing poverty.

In sum, the case for cancelling categorical household energy subsidies and using the savings to finance increases in the UMB seems quite strong. However, the relatively small share of GDP devoted to both the UMB and categorical benefits, and the declining numbers of UMB recipients during 2007-2009, suggests that the UMB is not a magic bullet for income poverty and household energy insecurity in Kyrgyzstan.[53] The eligibility criteria and the small numbers of beneficiaries likewise argue against the MSB's effectiveness in this respect. Instead, more research may be needed to better understand:

- The energy consumption characteristics of households in which pension benefits (and especially the associated "targeted electricity compensation" payments) make important contributions to family incomes;

- The longer-term sustainability of Kyrgyzstan's pension system—particularly in light of allegations of mismanagement under the Bakiev administration; and

- If the sustainability or effectiveness of these social protection instruments would be found wanting, whether a return to bloc/lifeline tariffs might not prove to be a more effective response to the challenges posed by rising energy prices.

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[51] The effectiveness ratio was somewhat less favourable for reductions in the extreme poverty gap: 10 som for pension benefits, as opposed to 5 som for the UMB.

[52] UNICEF found that, in 2007, the child poverty rate in households receiving the MSB was 43%, while in households not receiving the MSB the child poverty rate was 46%. The comparable figures for extreme poverty were 8% and 14%. *National Report on Child Poverty and Disparities*, issued in April 2010, p. 55.

[53] For more on measures to strengthen the UMB, see *Social Safety Net in the Kyrgyz Republic: Capitalizing on Achievements and Addressing New Challenges,* World Bank, May 2009, pp. 11-12.

These studies suggest the following conclusions, which should guide further work on poverty, energy, and household vulnerability in Tajikistan and Kyrgyzstan:

- In Kyrgyzstan, as well as in Tajikistan, universal household access to uninterrupted year-round electricity supplies had been lost (or had never been achieved) even before the "compound crisis" events of the past two winters took hold. This underscores the importance of survey research to identify the numbers, location, and vulnerability characteristics of these households in the two countries.

- In Tajikistan, labour migration (primarily external, but also internal) has been once again shown to be the key coping mechanism for low-income (and food insecure) households. By contrast, the effectiveness of small-scale agricultural activities for income generation and food production for household consumption seems rather modest. As remittance inflows during the first quarter of 2010 in both countries seemed to be returning to pre-crisis levels, this bodes well for vulnerable households' prospects in the near future.

- The data and analysis presented in this research strongly support the view that higher energy tariffs can constitute a significant burden on low-income households—particularly in urban areas that rely on electricity for heating and cooking, who have limited options for fuel switching. In Kyrgyzstan, such households would seem to represent at least 400,000 people.[54] In Tajikistan, where urban poverty rates are higher and the population larger, and where reliance on electricity for heat and cooking in urban areas is not uncommon, the numbers of at risk individuals could be at least as large.

- Despite significant increases in social protection payments in 2010, there is persuasive evidence that these payments did not effectively reach many of the households who needed them most. Apparently only 16% of UMB recipients in April 2010 were in Kyrgyzstan's northern regions—where urbanization rates are higher, temperatures are colder, and heating needs are greater; and where poor urban households are more likely to rely on electricity for heating (and cooking). The UMB's relatively small size, combined with the fact that other key social protection instruments (categorical benefits, the MSB, pensions) are not means-tested or targeted to low-income households, means that most of these increased benefits are not reaching energy-insecure households. Small wonder, then, that the April 2010 protests over higher energy tariffs that unseated the Bakiev government were centered in northern regions like Talas and Naryn.

These results suggest that more research may be needed to:

- identify the numbers, location, and vulnerability characteristics of households whose welfare could be threatened by higher energy tariffs in the two countries;

[54] According to official data, the urban poverty rate in 2008 was 22.6%; 1,827,400 of Kyrgyzstan's 5.3 million residents were classified as living in urban areas. This corresponds to 413,000 people. In light of the decline in final consumption reported for 2009 and the problems Kyrgyzstan has experienced in 2010, these numbers are unlikely to have declined since 2008.

- combine this with compatible survey research on issues of access to, and affordability of, water, sanitation, and other communal services, in the two countries;

- better understand the exact roles (pertaining to household energy security) of the UMB, pensions, and other social protection instruments in Kyrgyzstan;

- develop a better similar understanding of the social protection/household energy security nexus in Tajikistan; and

- clarify whether, in light of questions concerning the effectiveness of social protection instruments in addressing household energy insecurity in the two countries, a return to bloc/lifeline tariffs might not prove to be a more effective response to the challenges posed by rising energy prices.

Energy tariffs in Kyrgyzstan

Non-traditional threats to vulnerable households, in the form of energy, water, and food insecurity, are important not only in and of themselves, and not only because addressing these threats often requires unconventional efforts to bridge the gap between development programming and humanitarian response. These threats can themselves be symptoms of deeper, more fundamental political, social, and economic crises. And, they can provide the spark that transforms development shortcomings into humanitarian crises and armed conflict. The April-June 2010 events in Kyrgyzstan are, sadly, a confirmation of such arguments. While these developments have many causes, the dramatic increases in household electricity and heat tariffs introduced in January—which were part of the response to the energy crises of the past two winters—were one of the precipitate causes of the popular uprising that overthrew President Kurmanbek Bakiev in April. Subsequent developments have featured the rollbacks of many (although not all) of these tariff hikes, the cancellation of efforts to privatize Kyrgyzstan's electricity distribution companies, and the emergence of serious concerns regardiung the Kyrgyzstan's energy sector's preparations for the winter of 2010-2011.

The April events were then tragically followed by the violent clashes in May and June between ethnic Uzbek and Kyrgyz living in Kyrgyzstan's southern regions of Osh and Jalalabad. While the causes and full consequences of the June events are unlikely to be known for some time, current estimates place the number of dead at 2000, and the numbers of refugees and internally displaced persons at close to 400,000. Significant damage has been done to urban infrastructure in the south, and perhaps 5-10 percentage points of growth taken off of 2010 GDP. Deep enmities have been created among communities that had lived together for thousands of years, with possibly irreparable consequences for social capital and cohesion. In this respect, the consequences of the compound crisis in Kyrgyzstan have themselves been "compounded".

Table 6—Electricity tariff trends in Kyrgyzstan (per kWh, 2009-2010)							
	1 July 2009		*1 January 2010*		*1 April 2010*		*1 July 2010**
Users[55]	*In som*	*In $*	*In som*	*In $*	*In som*	*In $*	*In som*
Households	0.71	$0.017	1.50	$.034	0.71	$0.016	1.90
Industrial enterprises	1.09	$0.026	1.50	$.034	1.32	$0.029	1.90
Budget funded institutions	1.14	$0.027	1.50	$.034	1.32	$0.029	1.90
Agricultural users	1.09	$0.026	1.50	$.034	1.32	$0.029	1.90
Pumping stations	0.77	$0.018	1.50	$.034	1.32	$0.029	1.90
Other users	1.16	$0.028	1.50	$.034	1.32	$0.029	1.90

** Since annulled.*
Source: Press reports, UNDP calculations.

What exactly happened with energy tariffs and policies in Kyrgyzstan in 2010? On 1 January, electricity and district heating tariffs were raised significantly (please see Tables 6 and 7). Simultaneously, the government also increased the average pension payment (by 24%), public sector wages (by 200 som per month),[56] and cash transfers under the UMB and the MSB (by about 18% and 81% respectively). In addition, the number of groups of categorical beneficiaries was reduced from 38 to 25, and these benefits (including those for energy) were monetized. Beneficiaries instead became eligible to receive a monthly lump-sum payment, which varied in size between 1000 to 7000 som (depending on the beneficiary class).[57] Residents of mountainous areas accounted for almost two thirds of these beneficiaries, which totaled 52,000 (10% of the population). People living with disabilities constituted another 20%, while the remainder consisted of war veterans (10%), law enforcement officials, military personnel, and a few other groups. After monetization, these untargeted categorical benefits represented a significant fiscal burden. The 1.7 billion som budgeted for these benefits in 2010 is more than double what was paid out in 2009, and represents 42% of total anticipated social assistance spending.[58] This figure could approach 1% of GDP (compared to the 0.6% of GDP the World Bank ascribed to categorical benefits in 2005).

As described above, the effectiveness of the social protection instruments that were intended to mitigate the impact of these steep tariff increases on vulnerable households proved unequal to the task. As suggested by the 2008 and 2009 USAID studies, when introduced without (i) improved management within the energy sector (particularly to reduce extensive theft and losses); (ii) the credible threat of disconnection for non-payment; (iii) effective public communications concerning the need for, and low-cost options for responding to, higher tariffs; (iv) consumer acceptance of the higher tariffs (*inter alia* in the form of growing arrears that

[55] Households consumed 38% of Kyrgyzstan's electricity production in 2008. Industrial users accounted for 16% and net exports 6%, while agricultural users accounted for only 1%. Other users (the bulk of which were presumably budget-funded institutions) consumed 8% of Kyrgyzstan's electricity. The remainder (31%) was accounted as "losses".
[56] This constitutes a 3% increase, relative to the officially reported economy-wide average wage.
[57] By contrast, the average national gross wage during the first quarter of 2010 was 6321 som.
[58] These data come for an Agency of Social Welfare report issued on 1 May 2010.

reduced collection and broadened the wedge between nominal and effective tariffs);[59] and (v) adequate targeting of social benefits, the higher tariffs made a major contribution to a popular revolution.

Table 7—District heating tariff trends in Kyrgyzstan (per gcal, 2009-2010)							
	2009		***1 January 2010***		***1 April 2010***		***1 July 2010****
User class	***In som***	***In $***	***In som***	***In $***	***In som***	***In $***	***In som***
Households	254	$5.9	1050	$23.7	715	$15.8	2500
Industrial enterprises	254	$5.9	1050	$23.7	929	$20.5	2500
Budget funded institutions	254	$5.9	1050	$23.7	929	$20.5	2500
Other users	254	$5.9	1050	$23.7	929	$20.5	2500

** Since annulled.*
Source: Press reports, UNDP calculations.

On 20 April, a provisional government decree reduced electricity, heating and hot water tariffs, reversing some (but not all) of these increases. The tariff increases that were to be introduced on 1 July were cancelled completely. The resulting tariff structure has some important implications, including the following:

- ***Nominal tariffs have gone up, in some cases, substantially.*** While households are once again paying 2009 tariffs for electricity, they are paying significantly higher tariffs for district heating and water than they did last year.[60] Likewise, despite benefitting from moderate reductions in April, commercial and budget-funded organizations are still paying higher tariffs for electricity and (especially) heat than they did in 2009. As a result of these increases household prices for electricity, gas, heat, and other fuels during January-September 2010 were still some 14% above year-earlier levels. This was largely due to increases in heat (71%) and gas (12%) tariffs. Household water tariffs also rose some 30% during this time.

- ***Increased cross-subsidization of households.*** The new tariff structure's two-tier system (with a lower rate for household electricity consumption) has effectively increased the cross-subsidization of household energy consumption.

- ***A significant shortfall in energy sector revenues has accrued,*** relative to what was anticipated at the start of 2010. This shortfall raises important doubts about the

[59] Acting Energy Minister Osmonbek Artykbaev informed a visiting mission on 24 May that the collection rate for household electricity revenues had dropped to 60% in April 2010. (According to a USAID report, the collection rate for distribution companies in 2009 had been 95%. Source: *Electricity Loss Reduction for the Kyrgyz Power Sector*, USAID, Biskek, 25 March 2010 (revised 30 April 2010), p. 18.) By the same token, the April reversal of the tariff increases introduced earlier in the year could help increase collection rates, so that the effective tariff reversal may not be as severe as what is implied by changes in nominal tariff rates.
[60] Household water tariffs were raised 36.5% in March. On the other hand, a presidential decree in late June reduced irrigated water tariffs during the summer of 2010. Source: "Временное правительство Кыргызстана обещает значительно снизить тарифы на поставку поливной воды с 1 июля 2010 года" (24.kg - 24.06.2010).

government's ability to finance the energy sector's preparations for the winter of 2010-2011. In addition to reflecting the fall in collections, this shortfall results from the cancellation of the January and (anticipated) July increases in residential electricity tariffs. According to statements made in May by Ministry of Energy officials, this shortfall totals some 2.5 billion som ($55 million).[61] The cancellation or suspension of financing for most investment projects in the energy sector, increased electricity exports to Kazakhstan, the introduction of anti-corruption and cost-reduction measures, and support from the state budget (perhaps in quasi-fiscal form), are to compensate for this shortfall. Should difficulties in these areas combine with harsh weather this winter, at least some of the progress Kyrgyzstan has made with energy security since mid-2009 could lost—even despite the much higher water volumes at Toktogul. Press reports indicate that, as of early November, only 15% of the customers of the national *Kyrgyzzhilkommunsoyuz* heat and communal service supplier were enjoying working connections to the company's thermal energy infrastructure.[62]

How have energy and water output and supplies been affected? Official data point to a significant turnaround in electricity generation in 2010 (see Table 8 below), as well as to continued growth in coal production. Higher prices, and the diminishing effects of the drought of 2008 on Kyrgyzstan's hydropower generation capacity seem to have been the key drivers here. While electricity was rationed in much of the country during the winter of 2009-2010, these shortfalls seem to have been less draconian than during the previous winter. However, thermal power generation (for central and district heating), and water supplies to households, have continued to decline in 2010—despite higher prices and ample precipitation.

Table 8—Trends in energy, water production, supply (2007-2010)

	2007[63]	***2008***	***2009***	***2010****
Electricity generation	2%	-21%	-6%	9%
Coal production	23%	24%	23%	5%
Thermal generation	0%	3%	-4%	-3%
Water collected and distributed	0%	-4%	-2%	-3%

** January-September 2010 over January-September 2009.*
Source: State Statistical Committee, UNDP calculations.

These trends are occurring against a backdrop of deteriorating macroeconomic indicators, reflecting the knock-on effects of the April and June events. After posting 16% GDP growth in

[61] This is in addition to financial shortfalls from other sources. These include: the cancellation of the privatization of the SeverElectro and VostokElectro power distribution companies, which had generated income for the state budget of $3.0 and $1.2 million respectively; some $8 million in VAT and retail tax exemptions granted to the energy sector by the provisional government; and some $4 million in budget subsidies granted to the KyrgyzZhilKommunSoyuz communal services providers' union. If these sums are factored in, the World Bank estimates that the energy sector's financial gap grows to 6.8 billion som ($150 million).
[62] Source: http://tazar.kg/index.php?dn=news&to=art&id=1394, 5 November 2011.
[63] In 2007 electricity accounted for 39% of Kyrgyzstan's total energy balance. Coal accounted for another 21% and gas for 20%; the remainder was made up of petrol (13%), diesel (5%), and mazut (2%). Source: UNDP calculations.

the first quarter of 2010, Kyrgyzstan reported a sharp economic downturn in the second and third quarters. Preliminary official indicators indicate that real output during January-October actually declined, with agriculture, construction, and services being particularly hard hit. After being in surplus earlier in the year, the state budget has lurched into the red; the Finance Ministry in September was anticipating a deficit of 10% of GDP for 2010. The IMF's October forecast calls for a 3.5% decline in GDP for the year as a whole—which would make Kyrgyzstan the only country in the former Soviet Union not to experience economic growth in 2010. The sharp increases in food price inflation that took hold in the second half of the year, as well as the high rates of energy price inflation, seem likely to exacerbate the impact of Kyrgyzstan's recession on many vulnerable households.

Table 9—Kyrgyzstan: 2010 macroeconomic trends (January-October data)	
Change in GDP	-1%
- Without Kumtor gold production	-1%
Change in industrial output	14%
- Without Kumtor gold production	14%
Change in gross agricultural output	-3%
Change in construction output	-6%
Change in retail sales	-11%
Change in tourism activities	-12%

Source: State Statistical Committee, UNDP calculations

Reflections on responses

The previous sections of this paper focus largely on documenting and analyzing recent developments along the poverty/energy/vulnerability nexus in Tajikistan and Kyrgyzstan, as well as reviewing the research on these topics that is now emerging. Such a focus naturally raises questions of what is to be done, and how progress in this direction should be assessed. In seeking to answer these questions, three general points should be made.

First, it is clear that a serious attempt at articulating a comprehensive answer to these questions—addressing these issues both for the governments and the international community—would require a separate paper. In terms of assessing the international community's response to developments in Tajikistan and Kyrgyzstan, and proposing possible next steps, such an attempt has been made, in the form of UNDP's *Implementing the Central Asia Regional Risk Assessment: A Framework for Action* document, which was published in mid-2009.

Second, it is also clear that, in the time elapsed since the winter crisis of 2007-2008, both governments and the development organizations working in Central Asia have recognized the severity of these issues, and have taken on board many recommendations that might be made here, or which were made in the *Framework for Action* document. The UN system, and the international community more broadly, have employed early recovery programming to bridge the gap between emergence/humanitarian responses and development programming, in responding to the compound crisis. Like many other international organizations, UNDP during

2009-2010 dramatically expanded in programming supporting early recovery, disaster risk reduction (including early warning/risk management systems), decentralized renewable energy, and energy efficiency and water conservation in Tajikistan and Kyrgyzstan, thanks to increased internal funding and financing provided by DFID and other bilateral donors.

Likewise, the governments of Tajikistan and Kyrgyzstan have increased investment in their energy and water infrastructures, and have sought to finance these investments from a variety of sources—state budgets, donor financing, increased borrowing (domestically and abroad), as well as through higher tariffs and public appeals. Work on large investment projects in power generation at Roghun and Sangtuda (Tajikistan) and Kambarata (Kyrgyzstan)[64] and transmission (the South-North line in Tajikistan; the Datka-Kemin line in Kyrgyzstan), has moved forward. These have been complemented by a greater emphasis on decentralized renewable energy sources (e.g., both governments are implementing ambitious programmes to develop small/micro/mini hydro power facilities), as well as on energy and water conservation measures. And, the governments have benefitted from donor funding to increase the financing of social benefits and protection.

Third, and finally, while much has been done by governments and the international community to address the energy, water, and food insecurity issues described above, a significant portion of the progress made in the last two years has resulted from above-normal precipitation and relatively warm winters. It is not clear how well this progress would stand up to the return of drought conditions, or severe winter frosts. Instead, questions should perhaps be asked about whether governments in Kyrgyzstan and Tajikistan have the institutional capacity and political will to take the steps needed to provide more durable solutions to these problems.

As the data in Table 1 above show, when it comes to tariff policy, the will is there: household tariffs for energy, water, and communal services in both countries have for years been rising at rates well above consumer prices in general. But the 2010 events in Kyrgyzstan remind us, higher tariffs can be a double-edged sword. As USAID research points out—in the absence of: (i) improved management within the energy sector (particularly to reduce extensive theft and losses); (ii) the credible threat of disconnection for non-payment; (iii) effective public communications concerning the need for, and low-cost options for responding to, higher tariffs; and (iv) consumer acceptance of the higher tariffs (*inter alia* in the form of growing arrears that reduced collection and broadened the wedge between nominal and effective tariffs), higher energy tariffs can be ineffective—or worse.

In other words, without more institutional capacity for better energy sector governance and more effective social policy, prospects for durable improvements in household energy will remain hostage to weather conditions. Many of these same issues are present in the communal services sector, where higher tariffs for water, sanitation, rubbish collection and disposal, and the like need to be combined with capacity development initiatives for local authorities (who often hold *de facto* responsibilities for providing these services), and civil society (to promote the

[64] This formulation is not intended to convey approval or disapproval of these projects—some of which (e.g., Roghun, Kambarata) are the subjects of tensions with downstream countries. Nor is it intended to suggest approval or disapproval of their financing methods. The point is rather to illustrate the governments' determination to move along a broad front to address energy and water insecurity issues.

grass-roots civic engagement needed to make energy and water conservation initiatives work). In terms of food security, the introduction of additional “freedom to farm” measures in Tajikistan, to reduce the administrative and financial constraints that trap households in the cotton sector, are needed to strengthen the supply response that could be evoked by higher food prices. In both countries, the higher food prices now taking hold should be complemented by the extension of government, private sector, and donor-funded microfinance activities, as well as more and better programming in rural infrastructure, development, and social protection.

Conclusions

Were it not for the April events in Kyrgyzstan, we might conclude that the compound crisis phenomena that caught our attention two years ago there and in Tajikistan were over. Water levels at the main hydropower stations are at or above seasonal norms; rapid growth in remittances has returned—matters seemed to be reverting to “normal” developing economy status. But the April and June events in Kyrgyzstan remind us just how fragile such “normalization” can be. They also underscore the continuing importance of designing and implementing policies, programmes, and projects that increase the resilience of vulnerable households to higher energy and food prices, irregular energy supplies, and other, non-conventional forms of non-income poverty. The difficulties of Kyrgyzstan’s social protection instruments in mitigating these insecurities shows us how much is still to be done in this area.

The research that has emerged on the poverty/energy/vulnerability nexus in these countries in the last two years suggests a number of conclusions regarding directions of further work. These include the following:

- In Kyrgyzstan, as well as in Tajikistan, universal household access to uninterrupted year-round electricity supplies had been lost (or had never been achieved) even before the events of the past two winters took hold. This would seem to underscore the importance of survey research to identify the numbers, location, and vulnerability characteristics of these households in the two countries. Aligning this research with the methodologies employed in (and therefore results of) the 2008 and 2009 USAID studies referred to above, as well as the official data collected by the state statistical committees, would seem quite desirable and important.

- The USAID 2008 and 2010 reports offer a wealth of useful information on policy and reform issues pertaining to the energy sector in Kyrgyzstan—particularly policy and governance reform issues. Replicating this research in Tajikistan would seem quite desirable and important. So would extending the sectoral focus of this work to water, sanitation, and other communal services.

- The centrality of national and household energy security issues in both countries underscores the importance of monitoring policies and reforms in these sectors. In Kyrgyzstan, the Ministry of Energy’s Fuel and Energy Sector Transparency Initiative would seem to be particularly significant.[65] In addition to being important in and of themselves, efforts to modernize and improve the transparency of the billing practices employed by Barqi Tojik and Kyrgyzstan's regional electricity distribution companies are pre-conditions for improving the ability of social policy institutions to better target energy subsidies to vulnerable households in the two countries.

- Social policy reform has been a major focus of donor attention (and financing) in Kyrgyzstan during the recent years.[66] The April 2010 events have shown how important the remaining gaps and lacunae in the social safety net still are—particularly as pertains to energy. A comparative diagnostic of the energy-related dimensions of social policy in the two countries (e.g., effectiveness of pensions as a response to household energy insecurity; prospects for a return to bloc tariffs, etc.) would be most useful.

[65] Key elements of FESTI include the: (i) creation of an Energy Sector Oversight Council (to meet quarterly), with representation of civil society and user groups, as well as company and ministerial officials; (ii) expanded use of escrow accounts, and other modern information and financial management mechanisms (including via e-governance), to increase the transparency of financial flows within the sector; (iii) better use, monitoring, and enforcement of performance agreements with energy company management (including quarterly reporting on fulfillment of the performance agreements); (iv) introduction of more transparency in tariff setting; and (v) expansion of competitive tenders for electricity exports and imports, and for fuel and equipment procurement.

[66] See for example *Social Safety Net in the Kyrgyz Republic: Capitalizing on Achievements and Addressing New Challenges,* World Bank, May 2009, pp. 11-12.