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ACCELERATING SUSTAINABLE GROWTH IN POST-CONFLICT SERBIA

**GUIDED CASE STUDIES IN VALUE CHAIN DEVELOPMENT FOR
CONFLICT-AFFECTED ENVIRONMENTS**

microREPORT #87



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LIST OF ACRONYMS

AOR	Area of Responsibility
CHF	Cooperative Housing Foundation
CRDA	Community Revitalization through Democratic Action
FRY	Federal Republic of Yugoslavia
HACCP	Hazard Analysis and Critical Control Points
ICG	International Crisis Group
ICTY	International Criminal Tribunal for Yugoslavia
IDP	Internally Displaced Person
IRD	International Relief and Development
KLA	Kosovo Liberation Army
MoA	Ministry of Agriculture
JV	Yugoslav Army
SEDP	Serbian Enterprise Development Project
SEE SALW-UNDP	South Eastern Europe Small Arms and Light Weapons
SFRY	Socialist Federal Republic of Yugoslavia
SIDA	Swedish International Development Agency
VAT	Value Added Tax
UCPMB	Liberation Army of Presevo, Medvedja and Bujanovac
UNDP	United Nations Development Program
UNHCR	United Nations High Commissioner for Refugees
USAID	United States Agency for International Development

FOREWORD

This report would not have been possible without the valuable contributions from the following individuals and organizations:

All of the dairies and meat processors that participated in the field research surveys: Lazar, Doma and Jastrebacka dairies in Toplica region; Zornic, Biomlek and Ljin Dairy in Sandzak region; Fontana, Doda, and Ajka dairies in the Pcinjski region; Kostic, Niska dairies and Pogled Rosica Milk Collection in Niska region; Belan and Mihajlovic dairies in Sumadija region; Mesar, Pardza and Drakca meat processors in Rasina; and Mesokomerc and Dva Drugara meat processors in Niska region.

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DEFINITIONS

The definitions given for the following terms are used consistently throughout this report:

Sector: A major division of a country's economy. For this case study, agriculture is a sector.

Subsector: A sub-division of an economic sector. This case study considers the impact of donor assistance in the dairy subsector.

Value Chain: A series of enterprises, individuals and activities linked to one another through the transfer of a good or commodity that results in a value-added end product demanded by consumers. Michael Porter defines a value chain as, "a chain of activities. Products pass through all activities of the chain in order and at each activity the product gains some value." The use of singular and plural in this definition imply that a single value chain may well represent multiple final products and it is, therefore, correct to refer to the dairy value chain in the case study.

Sales Channel: The transaction stream a product makes from production to processing to final sale. While one subsector's value chain may represent multiple final products and end markets, a sales channel maps the path of one specific good to a distinct, final end market.

Sample Group: For the purposes of this case study, a sample group represents the group of linked value chain actors that participated in the AMAP field research surveys. All sample groups consisted of a single dairy processor plus two dairy farmers who supply milk to the dairy and a final end-market buyer.

Intervention Group: For the purposes of this case study, an intervention group is defined as a collection of sample groups that have benefited from donor intervention at the same level of the value chain. In this case study there are three intervention groups: Processor-Intervention, Farmer-Intervention, and Non-Intervention, each corresponding to the sample groups surveyed to determine the impact of the intervention.

Actor: An enterprise or individual working at some level of a value chain sample group. For the purposes of this case study, the team attempted to survey at least four actors per sample group: two farmers, one processor, and one wholesaler or other end-market buyer.

End-Market Buyer: A value chain actor serving as one of the links between the processor, who produces a finished good, and the final retail outlet. In this case study, the end-market buyers are wholesalers, distributors or retail outlets.

Indicator: An evaluation criterion that measures the difference in performance between different intervention groups. In this case study, there are three Market Revitalization indicators and three Market Linkage Strengthening indicators.

Criterion: A single, specific, performance-related measurement, a group of which constitutes one indicator. For example, in this case study, there are five criteria used to measure the Production & Sales indicator (which in turn is one of the Market Revitalization indicators). In this example, the five criteria are: i) dairies' perceived change in raw milk supply, ii) average herd size, iii) average dairy processing capacity, iv) end market buyers' perceived change in supply of finished dairy products, and v) percent change in end-market sales.

EXECUTIVE SUMMARY

SCOPE AND METHODOLOGY

The objective of this case study is to evaluate the impact of two value chain development interventions—at the processor level and the farmer level—to test the hypothesis that interventions at the processor level can lead to faster market revitalization and stronger market linkages in targeted subsectors. This research also contributes to three value-chain research questions: i) How can the value chain approach contribute to rebuilding markets in post-conflict situations? ii) How can end markets best be used to drive market upgrading and value chain strengthening in post-conflict situations? and iii) How can strategic subsidies, including grants and/or vouchers, be used to lay the groundwork for an eventual transition to a market-driven economy? Mercy Corps conducted interviews with 53 value chain actors in the dairy subsector and 22 in the meat subsector in sample groups that received donor assistance at both levels (processor and farmer) and with sample groups that received no post-conflict donor intervention. In addition, the case study assesses the impact of similar levels of intervention in value chain sample groups in ethnic majority and ethnic minority regions of Serbia. Due to the lack of field data, meat sector findings are only briefly reported in the final conclusion and recommendation section.

CONFLICT PERIOD

The Yugoslav conflicts of the 1990s resulted largely from nationalist and ethnic sentiment on the parts of Serbs, Croats, Bosnians and Kosovar Albanians and the desire of these groups to become fully independent countries separate from the Federation of Yugoslavia. Beginning in June 1991, Slovenia and Croatia seceded, followed by Macedonia and Bosnia and Herzegovina. Slobodan Milošević, at that time President of Serbia, argued that Serbs living in Croatia and Bosnia and Herzegovina had the right to remain part of Yugoslavia, supporting them politically and militarily throughout the conflicts in those countries. In 1998, the Serbian province of Kosovo, optimistic about the outcome of the Croatian and Bosnian conflicts, provoked a small-scale ethnic insurgency that resulted in Serbian counterinsurgency operations and led to ethnic cleansing and human rights abuses. In the spring of 1999, the NATO bombing of Serbia proper and subsequent UN protection of Kosovo effectively ended the conflict. The ensuing resignation of Slobodan Milošević in the face of demonstrations ended international sanctions, leaving Serbia and the international community the task of rebuilding the Serbian infrastructure and economy.

POST-CONFLICT RELIEF AND DEVELOPMENT ACTIVITIES

Since 2000, Serbia has been the recipient of over 4 billion € in international aid through grants or soft loans from European and U.S. donors. This case uses the impact of two programs as its test sample—the \$200 million USAID-funded CRDA project implemented by five partners throughout Serbia on a regional basis from 2001-2007 and the SIDA-funded Reka Mleka project, implemented by Opto-International from 2003-2008. The CRDA goal was to engage citizens in community and economic projects, increase participation in local decision-making, and improve livelihoods and economic well-being. This study examines the impact of the activities of three implementing partners: ACDI/VOCA, CHF and Mercy Corps. The Reka Mleka project aimed to develop sustainable and profitable milk production in southern Serbia by assisting the formation and development of dairy farmer associations through training and micro-investments.

DAIRY SUBSECTOR

This case examines value chain sample groups in the dairy subsector, one of the most conflict-affected agricultural subsectors (the livestock sector accounts for the livelihoods of 700,000 Serbian households). After enjoying considerable success in the 1980s with significant exports throughout Yugoslavia and Europe, the large, state-owned enterprises that formed the foundation of the industry suffered financial collapse due to the

conflicts and international economic sanctions. This resulted in the severing of value chains with farmers unable or unwilling to sell their products and turning, instead, to local markets and home production of dairy products. With the privatization of the state-owned companies and private investment into small, private dairy processors, the industry began to recover in the early 2000s. International donors also played a part through investment at both the processor and farm levels.

Many industry experts feel that to remain competitive, Serbia's dairy farmers and processors face consolidation and the need to either expand or cease their activities. However, some small dairies are well-positioned with established markets, good reputations, HACCP certification and viable product assortments and the majority of small processors think they can operate at current or slightly expanded levels in specific geographic markets and produce regional specialty products that large processors do not make. The dairy subsector has ample excess processing capacity to allow existing small dairies to grow given expanded markets and sufficient quantity and quality of raw milk.

POST-CONFLICT RESULTS

The case study found minimal differences between farmer and processor intervention strategies during the period immediately following the conflicts (2001-2004). However, during the transitional development period of 2005-2007, investments in processing began to pay off as capacity increased rapidly, resulting in greater market demand for raw milk and the subsequent growth of farms and farmer incomes—the intended outcome of the processor-intervention strategy. In addition, there were substantial increases in the indicators measuring raw milk supply, processing capacity, end market sales, and number of farmer linkages. According to dairy farmers, the processor investments did in fact have the desired upstream benefit originally intended by the strategy and the increased demand for raw milk gave them the confidence to invest in cattle and equipment. Livestock breeders reported a similar trend, stating that a consistent market through a stable processor was the key incentive for making livestock investments.

ETHNIC MINORITY REGION MARKET LINKAGES

The case study concluded that ethnic minority groups have stronger market linkages than similar homogenous communities in ethnic majority regions, due at least in part to the fact that value chain sample groups in ethnic minority regions exhibit more frequent and closer communication between actors. In other words, solidarity based on common ethnicity, economic status and civil rights facilitates close social ties and business linkages.

RAW MILK SUPPLY AND HERD SIZE

Results vary only slightly among dairy farmers in the three intervention groups with all citing increased demand for raw milk. Current demand is perceived as very strong, and most farmers say they could sell at least 50 percent more raw milk if they had sufficient herd size. For farmers in both the farmer- and processor-level intervention groups, herd sizes more than doubled from 2001-2007, with those in the processor-intervention group recording the largest increase, followed closely by producers in the farmer-intervention groups. However, farmers in the intervention sample groups cited different reasons for increased herd sizes—farmer-intervention sample groups stated that donor interventions were the impetus for further expanding production, while processor-intervention sample groups cited a “stable market for raw milk,” a result of donor investments in processing equipment, as the major reason for increasing their herd size. All food processors in Serbia are required to be HACCP-certified by January 2009 and current demand for raw milk is influenced by stricter quality regulations that force dairies to upgrade their facilities and demand higher quality from farmers.

LIVESTOCK HERD SIZE

While both groups of livestock farmers linked to processors, as well as those not linked to processors, reported increased herd sizes, livestock breeding comprises a much larger portion of household income for farmers linked to processors, demonstrating sustained commitment to the subsector.

DAIRY PROCESSING CAPACITY

Not surprisingly, the increase in dairy working capacity in the processor-intervention sample groups was significantly higher than that in the farmer- and non-intervention sample groups. The processor-intervention group recorded a 351 percent increase during the post-conflict and transition periods and verified that international donor assistance triggered larger personal investments and was the main factor for the increases in capacity. This is compared to increases of 267 percent and 3 percent for the non-intervention and farmer-intervention groups, respectively.

RAW MILK AND PRODUCT QUALITY

Most dairies reported that raw milk quality during the post-conflict period was low though it improved somewhat due to modernized milking equipment; they also noted that raw milk quality generally decreased when farmers were unhappy with prices. Low prices translated to diluted and unsanitary milk, as farmers showed their discontent. While all three groups noted increased product quality from 2001-2007, processor-intervention groups recorded slightly higher quality increases than other groups, citing increased technical experience, new technologies and equipment, better packaging and improved raw milk quality, as well as donor investments at the processor level. Meat processors in the processor-intervention group also credited donor investments as being a key factor in improved quality.

END-MARKET BUYERS

Of the three intervention groups, the processor-intervention sample groups recorded the highest satisfaction with supplies of finished dairy products and the largest sales increases during both the post-conflict and transitional development periods. End-market buyers cited the increase in the number of small dairies as the primary reason for increased supplies. However, they did not indicate that increases in dairy processing capacity were a major reason for increased profits, claiming the introduction of the value-added tax (VAT) system in 2004 as the main factor because it eliminated black market sales and illegal competitors. They also mentioned the expansion of retail outlets and higher prices. While increases in end market sales were not linked to donor interventions, the data does show the impact of the improved enabling environment.

MARKET LINKAGES

While the number of farmers linked to sample groups increased throughout the post-conflict and transition periods for all intervention groups, the processor-intervention group had the greatest increase, with three times the number of farmers in the supply network. Logically, the larger number of farmers closely mirrors increases in processing capacity. Similarly, the number of dairies supplying end market buyers with products grew for both intervention groups, as end market suppliers reported opportunities to purchase from more processors.

INTERVENTION GROUP RELATIONSHIPS

The business relationships between value chain actors in all three intervention groups improved significantly and are rated as very good. During the post-conflict period, actors cited corruption and delinquent payments and farmers say there is room for improvement in the number and quality of services processors offer farmers. Farmers in the ethnic minority regions reported stronger relationships, with a much lower tendency to switch processors than those in the ethnic majority regions. Relationships between processors and input suppliers generally were consistent and favorable, steadily improving throughout the period. However, little improvement in cooperation between dairy processors and end-market buyers was observed, dissatisfaction with payments being the most contentious issue.

EMBEDDED SERVICES

Farmers in dairy subsector sample groups where there was donor investment, whether at the processor or farmer level, reported a higher number of embedded services provided by dairy processors than farmers in

groups without donor investment. Furthermore, sample groups that received donor assistance were more comfortable investing personal resources in their supply network. Several processor-intervention groups assisted farmers to form associations; and dairies in the Presevo Valley ethnic minority region offered advance payments and hard currency transactions. No dairies reported receiving embedded services from their wholesale or retail buyers.

DIRECTION AND TYPE OF POST-CONFLICT ASSISTANCE

Dairy value chain actors in all three groups reported that post-conflict assistance should be directed at the entire value chain, split between the processors and farmers. The farmer-intervention group recommended slightly more assistance to farmers. In the under-developed region of Sandzak, interviewees cited infrastructure as the most needed form of assistance, while in more developed areas they cited equipment, training and livestock. All participants agreed that the severity of the conflict did not warrant basic humanitarian assistance. In the meat subsector, actors also felt that assistance should be targeted toward the entire value chain, though the majority felt that livestock breeders should have been the main recipients of post-conflict assistance.

RECOMMENDATIONS

A number of recommendations are offered to donors for future value chain development initiatives in post-conflict environments, including:

Develop indigenous subsectors, not new initiatives. Select strategic subsectors that use local knowledge and target existing market demand—a sounder strategy than introducing new activities having unknown market demand and often inadequate levels of human and physical resources and capacity.

Stimulate processing capacity in indigenous industries. Donor investments at the processor level are effective in stimulating value chain productivity, both upstream and downstream of the processor. Because they are central to the value chain, processors are vital to stimulating markets for raw materials and boosting production of value-added goods. Processor interventions should be directed toward indigenous industries with proven market demand and production experience.

Develop and deliver comprehensive, dynamic value chain approaches. Post-conflict economic development efforts should employ comprehensive value chain approaches that inject resources into a range of interventions along the entire chain. Prescribed, uniform approaches at a single level in the chain risk creating unbalanced growth and distorting markets.

Value chain interventions should focus on commercially oriented beneficiaries. While some programs aim to provide a mix of social safety nets and development support, economic assistance not directed to specific, vulnerable populations should aim to help commercially oriented beneficiaries who are linked to value chains as they can show greater short-term impact and long-term sustainability.

Promote embedded services in value chain programming. When processors demonstrate they are willing to provide embedded services to farmers, interventions should capitalize on this by promoting and emphasizing such win-win relationships.

Ensure market opportunities for farmers exist before investing at the production level. Creating stable and profitable markets for agricultural production is a prerequisite for investing at the farmer level. Without strong market incentives, farmers will not adopt new technologies or optimally utilize capital investments.

Facilitate relationships between farmers, dairies and end markets. Donors and implementers should engage in building and improving relationships between value chain actors through activities such as facilitating business roundtables, subsector directories and forward contracts between buyers and sellers.

Improve enabling environment in parallel with post-conflict value chain revitalization. While significant post-conflict assistance is delivered at the farm and firm levels to improve production and expand markets, reforming the policy environment is just as important for revitalizing value chains. Policy reforms that improve the business environment should be undertaken in parallel with farm and firm level assistance.

Monitor value chain performance to identify investment opportunities. Careful monitoring of the entire chain is necessary to determine where investments can have the greatest impact. This can and should be done through a well designed, planned and implemented M&E strategy.

Donor investments should balance breadth with depth. Donors should assess and determine the adequate level of investment to spread a critical mass of benefits to the widest possibly number of beneficiaries. Small investments directed toward too many beneficiaries may show limited benefits to a subsector; high investments in too few beneficiaries can have the same effect.

Improve coordination among donors and implementing partners. Improved cooperation between European and U.S. donors, and within a single donor's portfolio, can increase program impact. In the latter case, improved cooperation between USAID's CRDA and SEDP projects and implementing partners could have improved the types of investments made by CRDA partners and increased the concrete impact of SEDP.

I. INTRODUCTION

COUNTRY AND CONFLICT CONTEXT

Originally an independent kingdom and part of the Kingdom of Serbs, Croats and Slovenes after World War I, Serbia became one of the six republics within the Socialist Federal Republic of Yugoslavia (SFRY) following the Second World War. (The others were Bosnia, Croatia, Macedonia, Montenegro and Slovenia. In 1974 Tito gave voting rights within the Federal Presidency Council to the autonomous regions of Kosovo and Vojvodina; this was later revoked by Milosevic in 1987.)

Originally modeled after the Soviet Union, the country under the leadership of President Josif Tito was characterized by a more liberal brand of socialism and non-alignment between East and West during the Cold War. Following the death of Tito in 1980, long-standing political, economic and ethnic tensions between Croats, Serbs and Muslims rose to the surface resulting in wars in Croatia and Bosnia from 1991-1995, in Kosovo from 1998-1999 and international sanctions on Serbia from 1992-2001. By 2001 only Serbia and Montenegro held a loose union within the Federation, which was later dissolved after Montenegro's independence referendum in 2006 (see Figure 1). Since 1999, Serbia's southern province of Kosovo has been administered by the UN while negotiations continue to determine the outcome of its final status.

Figure 1: Map of Republic of Serbia (after secession of Montenegro)



Since the lifting of international sanctions in 2001, Serbia's economy has achieved strong growth, averaging 6 percent per year, fueled by agriculture (25 percent of GDP), light manufacturing and service industries. While now on a path towards Euro-Atlantic integration, Serbia continues to be plagued by Kosovo's undetermined status, outstanding extradition of war criminals and radical nationalist elements within its political system.

POST-CONFLICT RELIEF AND DEVELOPMENT ACTIVITIES

Since 2000, Serbia has received over 4 billion € (US\$6 billion at time of writing) in international aid through grants or soft loans from donors including USAID, World Bank, IMF, European Union, UNDP, OSCE as well as from Germany, Switzerland, UK, Austria and Sweden. Much assistance in the early post-conflict period focused on three areas: i) providing immediate humanitarian assistance to over 700,000 refugees and IDPs in Serbia; ii) promoting citizen participation through community and economic development projects to improve basic infrastructure, livelihoods and targeted subsectors; and iii) developing accountable and transparent national and local government institutions.

This case study examines several development projects in the second group, specifically four agricultural development projects in southern Serbia during the early post-conflict period of 2001-2004. ACDI/VOCA, CHF and Mercy Corps implemented three projects under the USAID-funded Community Revitalization through Democratic Action (CRDA) program and Opto International carried out the fourth, the Swedish-funded Reka Mleka (River of Milk) project. All four projects targeted interventions in the dairy and/or meat subsectors. The Mercy Corps CRDA agriculture strategy aimed to revitalize the markets for raw agricultural goods by increasing the capacity of, and developing new product lines for, small processing companies. CHF and ACDI/VOCA provided livestock and agriculture equipment donations at the farmer level, and Reka Mleka developed farmer groups by providing technical assistance and milk production equipment.

COMMUNITY REVITALIZATION THROUGH DEMOCRATIC ACTION

The CRDA program began in July 2001 and was implemented throughout Serbia by five implementing partners (ADF, ACDI/VOCA, CHF, IRD and Mercy Corps), one partner per geographic region covering all of Serbia except for Belgrade and Kosovo. The program was a six-year, \$200 million project (\$40 million per implementer). From 2001-2004 the program provided assistance to communities and municipalities to encourage citizen participation in social and civil infrastructure revitalization projects. CRDA concentrated on four programming pillars: i) civic participation, ii) civil infrastructure, iii) economic development, and iv) the environment. This project phase was characterized by a transition from relief to strategic, longer-term development. In 2005, USAID converted the program to CRDA-Economic (CRDA-E), which mandated that partners invest not less than 75 percent of their financial resources into economic development projects to increase incomes and employment opportunities for low-income municipalities and households. These last two years of CRDA centered on strategic institution building and subsector approaches to economic development.

REKA MLEKA “RIVER OF MILK” (SIDA)

The Swedish International Development Agency (SIDA)-funded Reka Mleka (River of Milk) project began in January 2003 with the aim of developing sustainable and profitable milk production in Nis and surrounding areas of southern Serbia. Over the course of the project, Reka Mleka assisted over 50 dairy producer groups through training and education in association management, milk hygiene and quality, feeding and forage production, and farm management. The program works extensively with local partner institutions to deliver training, building local service provider and association member capacity. The project micro-grant component provides grants of up to 10,000 € to associations for modern farming and production equipment. The project is scheduled to close May 2008.

RELIEF TO DEVELOPMENT TRANSITION

Over the past seven years development efforts in Serbia have undergone a gradual transition from reconstruction to long-term strategic development. In the early post-conflict period, many projects focused on economic infrastructure and livelihood support, maturing over the past few years to support economic development and institutional and capacity building initiatives through training and technical assistance. This study examines the interventions that occurred from 2001-2004 in order to analyze how development assistance impacted the revitalization of specific agricultural subsectors and specifically how it affected value chain actors. The research takes a comparative look at two main types of intervention: i) support to value-added processors, and ii) support at the producer or farmer levels.

DAIRY SUBSECTOR

The case study examines the dairy subsector, the one most heavily impacted by the conflict and an important contributor to rural incomes in Serbia. Of the 1.3 million total labor force in agriculture, 700,000 households are involved in breeding and selling livestock and 143,000 farms produce milk that they then sell to more than 70 dairies.¹

The dairy industry was hit hard during the conflicts of the 1990s. Dairy processing dropped by two-thirds and most milk and dairy products were used for personal consumption or sold on the black market. The dairy industry revived quickly, due to privatization of some of the largest state-owned dairies; significant private investment into new, startup dairies throughout Serbia; and foreign investment and expertise that helped improve quality and operating efficiency. While most dairies are

Serbia Milk Production			
	1988	Mid-1990s	2006
Raw Milk Total (tons)	1.54 million	N/A	1.6 million
Sold to Dairies (tons)	600,000 -700,000*	200,000 -300,000*	732,000 (45.8%)
* Key informant interview, Zora Micevic, Veterinarian Institute Belgrade.			

¹ Serbian Chamber of Commerce and the Serbian Investment and Export Promotion Agency (SIEPA).

small family-owned enterprises, the industry is consolidating because competition and quality regulations allow only the largest and most successful producers and processors to compete.

FRUIT AND MEAT SUBSECTORS

The case study originally planned to focus on the dairy and berry-fruit subsectors as these are two of the largest subsectors in Serbia and in the Mercy Corps CRDA area of responsibility. After initial key informant interviews, however, the team discovered that the berry-fruit subsector had not been severely impacted by the conflicts, primarily because Serbia continued to maintain production levels by redirecting export channels through Bosnia and Macedonia, successfully avoiding international sanctions. Farmgate prices were actually higher for berry-fruit during the conflict, as the state was in dire need of hard currency to help cope with the crippling inflation. Serbia was one of the largest exporters of berry-fruit in the world during the 1990s and today berry-fruit remains one of the few subsectors that did not suffer during the conflict period.

To replace the fruit sector, the study team selected the meat subsector, which had been severely impacted by the conflict and received substantial support through the USAID CRDA project. In the 1980s and early-1990s, the Serbian meat industry was strong, with large state processors supplying meat products to all of the republics, and

Serbia Meat Industry		
Year	Slaughtered Cattle	Processed Meat (tons)
1988	317,000	121,000
1996	194,000	103,000
2004	142,000	93,000

exporting to Europe and America. During the 1990 conflicts, however, many of the large slaughterhouses had to cease operations as the number of cattle decreased by half. The meat industry has been slow to recover in the post-conflict period and it is still far from its 1980 pre-war levels.

While meat subsector field data was collected and analyzed, it was later decided to omit the full section from the case study as the survey sample sizes were too small and value chain data too sparse to support a comprehensive sector analysis. Some important meat subsector findings that support major dairy subsector conclusions are included in the final conclusions and recommendations section.

CASE STUDY WORK PLAN SUMMARY

The Mercy Corps field research spanned a sixteen-week period: i) three weeks of survey preparation, key informant interviews and a desk study; ii) nine weeks of surveys and interviews with simultaneous content writing; and iii) four weeks of writing and editing. The desk study examined fifteen reports published by International Crisis Group, UNHCR, UNDP, USAID and Human Rights Watch covering the conflicts of the 1990s. Fifteen key informant interviews were conducted with USAID implementing partners, Mercy Corps beneficiaries, Ministry of Agriculture, National Veterinary Institute, National Statistics Bureau, UNHCR and one member of Parliament. Field surveys were conducted in southern and southeastern Serbia in both ethnic majority and minority regions, and a total of 75 interviews were conducted with value-chain actors in the dairy and meat subsectors. Because the study team did not identify meat sample groups that received farmer-level support or were located in ethnic minority regions, it collected less data on that subsector. The team interviewed farmers linked to a processor and receiving CRDA support; value chain actors in sample groups receiving processor-level donor assistance; and sample groups that did not receive donor assistance.

Case Study Research Summary (Number of Value Chain Actor Interviews)			
Subsector	Farmers	Processors	End-Market Buyers
Dairy (53)	26	14	13
Meat (22)	15	5	3
Total (75)	41	19	15

II. ANALYSIS OF CONFLICT AND POST-CONFLICT ENVIRONMENT

PRE-CONFLICT PERIOD

POST-WORLD WAR II

Following four decades of peaceful coexistence after the end of World War II, the Federation of the Republic of Yugoslavia (FRY) began to splinter when newly elected president Slobodan Milošević reignited Serbian nationalist sentiment within FRY, altering the balance of power that President Josif Broz Tito had so carefully preserved during his tenure.

MILOŠEVIĆ'S RISE TO POWER

Milošević's rise to power and association with the nationalist movement is generally recognized to have occurred on April 24, 1987 when he made his famous, impromptu speech in Kosovo Polje. During his visit to meet with local Serbs, the mostly Albanian population gathered outside and attacked police with stones, and police responded with force. Chaos ensued and Milošević responded by saying, "You must not be beaten, nobody has the right to beat you." The speech was aired that evening though without footage of the stoning, which had led to the police intervention. Although Milošević was addressing only a small group of people and not the public, journalists attached a great deal of significance attached to the remark. Ivan Stambolic, at the time President of Serbia, later said that he had seen that day as the "end of Yugoslavia." It was the first time that a Communist leader had openly sided with one nation and its demands over another.

REGIONAL NATIONALISM

Milošević was not alone in ascending to power through nationalist sentiment; his move occurred amidst a growth in nationalism in all of the former Yugoslav republics. In 1990, Slovenians and Croatians elected nationalist governments and in Bosnia and Herzegovina, the Communist single-party rule was replaced by an unstable coalition of three ethnically based parties.

CONFLICT PERIOD: 1991-2001

CESSATION OF SLOVENIA AND CROATIA

In June 1991, Slovenia and Croatia seceded from the federation, followed by the republics of Macedonia (September 1991) and Bosnia and Herzegovina (March 1992). There was no opposition to Slovenia's secession as it was ethnically homogeneous and Milošević supported the claims of Serb populations in other states that they be allowed to remain in Yugoslavia. These claims were based on the premise that Serb populations in Croatia (600,000) and Bosnia (1.4 million) should have the right to stay in Yugoslavia and Milošević argued that the Yugoslav Constitution gave the right of self-determination to nations (Serbs, Croats, etc.) and not republics (Serbia, Croatia, Bosnia). However, he refused the peoples' right of self-determination to the Albanians in Kosovo.

CROATIA CONFLICT

In July 1991, Croatia voted for independence and immediately revoked the rights of Croatian Serbs (12 percent of the population), which led to a Serbian boycott of Croatia's constitution. The Serbian-led Yugoslav Army quickly intervened to occupy most of Croatia's ethnic Serbian towns and villages. Six months of intense fighting

between the newly formed Croatian and Yugoslav militaries resulted in a UN-brokered cease-fire in 1992. The cease-fire was fragile and sporadic fighting over territorial claims in the UN-protected regions of Krajina and Eastern Slavonia continued through 1995, culminating in a Croatian push into eastern Croatia and leading to the displacement of nearly 300,000 Serbs into neighboring Bosnia and Serbia, according to the UNHCR.

BOSNIA CONFLICT

In 1992, the federal republic of Bosnia and Herzegovina, a republic comprising Muslims (37 percent), Serbs (30 percent) and Croats (17 percent) voted for independence, despite a boycott by ethnic Serbs. Military forces quickly formed with the Croats and Muslims aligned against the Serbs and both sides receiving backing from

Kosovo War Casualties*		
Total Civilians	Albanians	7,450-13,600**
	Serbs	1,000
NATO Bombing Casualties		
Total Civilians	500	
Total Soldiers 578	NATO	2
	Serbs	576
Kosovo Refugees & IDPs*		
Refugees	Albanian	850,000
IDPs	Albanians	>200,000
	Serbs	176,014***
* Human Rights Watch		
** Serbian National Defense Council of America		
*** UNHCR		

Zagreb and Belgrade respectively. Bosnian Serb forces soon captured as much as 70 percent of the country, although this was due partly to pre-war demographics in which Serbs tended to live in rural areas and Bosnians in the cities. The Bosnian War ended in November 1995 with the signing of the Western-backed Dayton Peace Accords, which designated Bosnia and Herzegovina's current political and geographical divisions. The International Criminal Tribunal for Yugoslavia (ICTY) found that the Serbian government was directly involved in the conflict and handed down indictments of top officials, including Milošević, for a number of incidents. ICTY estimates the casualties from the Bosnia War at 100,000, making it Europe's bloodiest conflict since World War II.

END OF CROATIA AND BOSNIA CONFLICTS

By 1995, the ongoing wars in Croatia and Bosnia had become an unsupportable burden for Serbia. The country experienced hyperinflation and a decline in living standards due to economic collapse and international sanctions (see Figure 2). Milošević attempted to force the Croatian and Bosnian Serbs to the negotiating table but was rebuffed by their nationalist leaderships. In response, despite his earlier support for their rebellions, he let it be known that they were on their own. The war in Croatia ended in August 1995 when Croatian forces overran the Republic of Serbian Krajina. Nearly the entire Croatian Serb population fled Croatia, escaping to Bosnia and Serbia. A month later, the Bosnian Serbs were brought to the brink of military collapse by a combination of NATO air strikes and a joint Croatian/Bosnian offensive, displacing many more hundreds of thousands of Serbs. Milošević subsequently negotiated the Dayton Peace Accords in the name of the Bosnian Serbs, ending the conflict.

KOSOVO CONFLICT

Optimistic after the outcomes of the Bosnian and Croatian wars, in 1998 the Serbian province of Kosovo provoked a small-scale, ethnic Albanian insurgency by the Kosovo Liberation Army (KLA) followed by Serbian counterinsurgency operations that prompted ethnic cleansing and human rights abuses. Sensitive to the violence of previous Yugoslav wars, the international community quickly intervened and established the Rambouillet Accords, which called for NATO administration of Kosovo as an autonomous province with 30,000 peacekeepers. The Milošević government's rejection of the accords led to a three-month NATO bombing campaign of Serbia in the spring of 1999, which destroyed much of the country's civil and economic

Figure 2: The Dinar's Descent

YEAR	DATE	DEVALUATION FROM PRIOR PEGGED RATE (%)
1991	January 1	12.00%
	April 19	39.90%
1992	January 25	78.30%
	March 1	26.30%
	April 12	57.50%
	July 1	83.60%
	Nov 14	73.30%
1993	April 9	98.40%
	June 16	95.60%
	July 2	54.20
	July 22	82.40%
	August 18	87.10%
	Oct 1	79.00%
	Nov 9	99.90%
	Dec 29	99.99%
1994-1998	Jan 24, 1994	99.99%
	Nov 26, 1995	62.60%
	April 1, 1998	57.90%

Source: Steve Hanks

From 1991-1994 the Serbian economy and its currency collapsed and in January 1994 monthly inflation reached a staggering 313 million percent.

infrastructure and displaced 80 percent of the province's population. In the aftermath of the war, the majority of Kosovo's Serb and Roma population fled into Serbia proper to escape persecution by vengeful Albanians. This only added to Serbia's already large IDP population.

FALL OF MILOŠEVIĆ

In 2001 Milošević was forced to resign after accusations of parliamentary election fraud led to large street protests. With Milošević's fall international sanctions were lifted allowing much-needed international aid and foreign investment to flow into the country.

ECONOMIC DECLINE

Yugoslavia had begun suffering an economic depression several years before its break-up in the 1990s. To fund its large scale industrialization in the 1960s and 1970s, Yugoslavia borrowed vast amounts of private Western capital (its foreign debt in 1981 was \$19.9 billion). After its export markets dried up due to the world oil crises in the 1970s, Yugoslavia took several large IMF loans on condition it liberalize its economy. This resulted in a continual devaluation of the Serbian Dinar and the second highest inflation ever recorded, 313 million percent.

ECONOMIC IMPACT OF CONFLICTS

The combination of war, crippling inflation, international sanctions and NATO bombing devastated the Serbian economy, whose state-owned enterprises were crumbling under massive international debt and IMF market liberalization conditions. The three-month NATO air campaign was the final straw, devastating Serbia's economy by destroying major trade, transportation and communication links. In 1993, at the height of the Bosnian conflict, 80 percent of Yugoslavia's budget was earmarked for military and police forces. Economic losses sustained by Serbia from the 1990s conflicts were determined to be between \$7-10 billion and the reconstruction of Serbia and Kosovo after the NATO air campaign was estimated at \$10 billion over three to five years.

POST-CONFLICT ANALYSIS

While there is no official definition of the post-conflict period in Serbia, the majority of humanitarian and reconstruction efforts concluded in 2004. In 2005, Serbia entered a transitional development phase of stability and growth guided by Euro-Atlantic economic and political integration.

INCENTIVES FOR VIOLENCE

The possibility of violence in Serbia remains due to several interconnected factors stemming from ethnic and religious divisions in the country:

1. In each of the ethnically divided regions, the degree of conflict increases with the level of poverty and low economic development.
2. Demographic shifts, especially in the ethnic Muslim regions of Sandzak, Presevo and Kosovo, include large populations of youth, many disaffected by the lack of employment opportunities and the most likely to participate in aggressive behavior or conflict.
3. Large numbers of refugees and IDPs have migrated to regions such as Vojvodina and Sandzak, putting additional stress on local resources and ethnic tensions.
4. Patronage along ethnic lines undermines social harmony. Ethnic Serbs continue to receive a disproportionate number of positions in government, state-owned enterprises and security organizations.

ETHNIC AND RELIGIOUS DIVISIONS

Serbia continues to maintain a relatively multi-ethnic composition with ethnic minorities comprising majorities in municipalities in Kosovo and Presevo Valley in southeast Serbia (Albanian Muslim), Sandzak in southern Serbia (Bosniak Muslim), and Vojvodina in the north (Hungarian). From 2001-2004 all four regions remained potential conflict areas due to varying levels of dissatisfaction with Belgrade representation, slow economic development, and their own aspirations for autonomy. Since 2005 tensions have eased somewhat with the peaceful separation of Montenegro, marginalization of radical political parties, and more government and donor support for the ethnic minorities.

KOSOVO

UN Security Council Resolution 1244 established an interim administration pending a final political settlement giving Kosovo substantial autonomy within the Federal Republic of Yugoslavia. Despite its UN Administration (UNMIK) peace-keeping force (KFOR) and autonomous government institutions, Kosovo remains part of Serbia and its final status to be determined. The protracted negotiations over the *Kosovo question* continue to be the single greatest potential flashpoint for renewed violence in Serbia. The Serbian and Kosovo leadership have made minimal efforts to ease tensions. In March 2003, ethnic violence killed 31 people after several Serbian orthodox churches and Kosovar mosques were attacked. Until 2004, Serbian leaders routinely called for the return of Yugoslav soldiers and police to Kosovo and for Serbs to boycott local elections. Even today, Kosovar Serbs remain entrenched in enclaves in the north with very little freedom of movement or security guarantees outside their villages. Tensions limit trade and economic cooperation though narrow, cross-boundary trade occurs mostly within the ethnic minority regions of Presevo and Sandzak where finished products are sold to distributors and end markets. Few goods are produced in or sourced from Kosovo.

Republic of Serbia 2002 Census (excluding Kosovo)	
Serb	6.2 million (82.9%)
Hungarian	293,000 (3.9%)
Bosniak (Muslim Slav)	136,000 (1.8%)
Roma	108,000 (1.4%)
Yugoslavs (Croatian, Montenegrin, Bosnian, Macedonian, Slovene)	81,000 (1.1%)
Albanian	62,000 (0.8%)
Other	605,000 (8.1%)
Total	7.498 million
Kosovo Population Estimates 2005*	
Albanian	1.93 million (92%)
Serb	111,000 (5.3%)
Other	57,000 (2.7%)
Total	2.098 million

PRESEVO VALLEY

This region comprises three municipalities along the northeast border with Kosovo—Presevo, Bujanovac and Medveja—and a population of nearly 100,000, including 70,000 ethnic Albanians. One of the poorest regions in Serbia, Presevo has suffered from long-term neglect, discrimination and exclusion from education, health care, state-owned companies and public sector jobs.² The recent conflict in Kosovo has generated fears of a *Greater Kosovo* spreading across the border into the Presevo Valley. From 2000-2001 an informal militia group called the Liberation Army of Presevo, Bujanovac and Medvedja (UCPMB) led a 17-month insurgency along the demilitarized buffer zone dividing Kosovo and Serbia, attacking police and other state targets. Order was restored only after NATO negotiated a reoccupation of the buffer zone and Belgrade proposed a peace plan calling for the reintegration of Albanians into political, social and economic life. According to the USAID Serbia and Montenegro Conflict Assessment of 2005, this area “is the region most likely to be affected by violence in the next two to three years. The unresolved issue of Kosovo combined with the lack of economic development and disillusionment with political leaders on all sides leaves the population polarized and frustrated.”

SANDZAK

As with Presevo, Sandzak is one of the least developed regions in Serbia, suffering similar forms of neglect and marginalization by Belgrade. Originally a Turkish administrative region located in Serbia and Montenegro, Sandzak encompasses eleven municipalities, six located in southern Serbia. Sandzak has the largest Muslim Slav (Bosniak) community in the Balkans outside of Bosnia and Herzegovnia (142,000/60 percent of the population). While Sandzak remained under close surveillance by the Yugoslav army during the breakup and conflicts, it

²International Crisis Group (ICG), *After Milosevic: A Practical Agenda for Lasting Peace in the Balkans*.

escaped violence. Relations between Serbs and Bosniaks are generally peaceful on the surface, though there are general feelings of mistrust between the groups. Serbs have traditionally held many of the important posts within the police and state-owned companies, while Bosniaks have created a bustling private sector in the textile and trade industries. Rural areas suffer from inadequate transport, energy and access to public services and remain some of the poorest in the country, surviving mostly on small-scale livestock farming. Though it has a lower risk of ethnic violence than Kosovo or Presevo, Sandzak remains a potential conflict area as long as infrastructure and economic development proceed at a slow pace.

VOJVODINA

Vojvodina is the most ethnically diverse region in Serbia and is home to 26 minorities and more than 300,000 displaced persons from the conflicts in Croatia and Bosnia. While historically a model of tolerance, ethnic tensions arose when Milošević revoked Vojvodina's autonomous status and placed a disproportionate number of Serbs into key state government positions. Considered the breadbasket of Serbia, Vojvodina's large commercial farming sector and foreign investments accounted for 45 percent of the state budget in 2005.³ While considered the least volatile ethnic minority region in Serbia, some tension exists between former Serb refugees (some former military) and wealthy ethnic Hungarians who hold different views on the region's relationship with Belgrade. Further concern exists over a bold political agenda that includes full autonomy should Kosovo obtain independence.

ACCESS TO CONFLICT RESOURCES

The command structures of the KLA and the UCPMB militia groups remain intact despite recent demobilization by KFOR and NATO troops. These groups enjoy loyal followings and can easily mobilize recruits and access the many weapon stockpiles in the region. As of May 2001, over one million weapons were registered in Serbia for a population of about 9 million, the highest rate of gun ownership in the former FRY. Even more concerning is the estimation of unregistered weapons—330,000-450,000 in Kosovo and in excess of 50,000 in Serbia. The majority of these illegal weapons are uncollected and many people retain arms for self-protection. The assassination of Serbian Prime Minister Zoran Djindjic in March 2003 demonstrated the power of criminal cartels operating in the country and the threat of lawless intervention in politics remains present as evidenced by threats to both the Serbian Deputy Prime Minister and the State Defense Minister.⁴

COLLECTIVE ACTION

While its physical and organizational conflict resources remain high, Serbia's collective action for conflict is much lower as the majority of Serbian citizens are more concerned with improving their economic situation than instigating violence. This is evidenced by the survey findings of a Belgrade polling company in 2004 confirming that the majority of citizens feel that low living standards and quality of life are the main problems they face, not security. However, with few opportunities for economic development or political engagement, Serbia's ethnic minorities may be inclined to vent their frustrations through conflict.

FINANCIAL RESOURCES

During the post-conflict period of 2001-2004, there were three sources of potential financing for renewed conflict. The largest was revenue from illegal trade of contraband, weapons and drugs by criminal networks exploiting porous borders in Kosovo and southern Serbia. Second were the large Serb and Albanian diasporas in Europe and America, which remained an important revenue source for many households. In the case of Albanians, their previous history of supporting such groups as the KLA made them serious source of funds for any potential conflict. Finally, there was the continued presence of Milošević-era criminal elements capable of

³ USAID/Serbia & Montenegro, Serbia & Montenegro Conflict Assessment, March 2005.

⁴ UNDP South Eastern Europe Small Arms and Light Weapons Monitor Report (SEE SALW), 2004

diverting state revenues to security structures. While not as prevalent today, all three remain potential financing sources for renewed conflict.

INSTITUTIONAL AND SOCIAL CAPACITY TO MANAGE VIOLENCE

The Serbian government did little from 2001 to 2004 to decrease tensions and integrate ethnic groups into society. There were three main reasons for this. First, a preoccupation by Serbia's leaders with macro-political issues such as the status of Kosovo, the future of FRY and the apprehension of convicted war criminals. The neglect of infrastructure, economic development and provincial services helped sustain tension among minorities already sensitive to decades of marginalization. Second, Serbia's centralized government provided little in the way of training or resources to help municipalities address their own problems and be credible peace brokers. Finally, radical politicians keen on stoking nationalist sentiments and ethnic conflicts plagued Serbian politics. While the government did achieve some small victories, such as the peaceful demobilization of the UCPMB militia in Presevo and strong vigilance of Vojvodina local and state officials, the government's ability to manage conflict was minimal at best.⁵ This has improved over the last several years due to increased foreign aid for municipal development in Sandzak and Presevo Valley and the marginalization of Serbian radical parties. Serbia's capacity to manage conflict will be tested in the coming year as potential violence lingers over the likelihood of Kosovo declaring independence.

CIVIL SOCIETY

Very few local NGOs had the resources to assist in managing potential conflict areas and issues and most were located in Belgrade and had limited reach in the high-risk ethnic minority areas of southern Serbia. International NGOs delivered much of the post-conflict assistance through community development and government capacity-building programs. Although Kosovo received a larger portion of foreign aid and has more non-state actors focusing on conflict management, government and civil society capacity remains low due to the intense focus on political status issues rather than on institution building.

REGIONAL AND INTERNATIONAL FORCES AFFECTING CONFLICT DYNAMICS

At present, the EU likely has the most positive influence over Serbia and Kosovo, considering the country's aspirations for membership. As a member of the Stabilization Pact for Southeast Europe and a candidate for the EU Stabilization and Association Agreement, Serbia has increased economic, political and social cooperation with the EU and its regional neighbors. Recently Serbia's parliament ratified the Central European Free Trade Agreement (CEFTA) which will replace over 30 bilateral trade agreements in the region. Despite closer EU and regional alignment, few Serbs have noticed tangible results such as increased incomes or employment. In spite of redefining its relationship with the EU, Serbia's closest ties remain with those of similar ethnic backgrounds, i.e., Serbs with the Republic of Srpska in Bosnia; Bosniaks in Sandzak with Sarajevo; Presevo Albanians with Kosovo; and Catholics in Vojvodina with Croatia. These ties are more social and economic than political and do not yet demonstrate any undermining influences.

WINDOWS OF VULNERABILITY

Peace among Serbia's ethnic minorities remained fragile from 2001-2004, as demonstrated by isolated incidents such as the accusation of Serb involvement in the death of two Kosovar Albanian teenagers, which later exploded into religious violence. Other triggers that fortunately passed peacefully included the assassination of Prime Minister Zoran Djindjic in 2003, the secession of Montenegro, and three parliamentary election attempts before a final government was installed.

⁵ USAID/Serbia & Montenegro, Serbia & Montenegro Conflict Assessment, March 24, 2005.

CURRENT CONFLICT TRENDS

The final status of Kosovo obviously remains the most serious risk for conflict in Serbia and the region. The issue has recently regained momentum in the international community with a final round of U.S./EU/Russian-sponsored talks, due to be completed by December 10, 2007. Analysts conclude that the talks are a formality and that the U.S. and EU will support Kosovo's independence and Russia will reject it. Over the past several months, the Serbian government has released alarming statements announcing "an energetic response" to any outcomes that jeopardize territorial integrity. In August 2006, an adopted Serbian parliamentary resolution read that, "Any unilateral recognition of Kosovo's independence will have unforeseeable consequences for regional stability. An energetic response will follow any action that seeks to jeopardize the sovereignty and territorial integrity of Serbia." It is anticipated that any call for independence will result in the movement of Serbs from northern Kosovo. While KFOR troops are a stabilizing presence the potential for small-scale conflict remains, with tensions rising as final status talks come to a close.

DAIRY SUBSECTOR CONFLICT TO PRESENT

1980s: The number of dairy cattle in Serbia peaked in the 1980s, reaching over 250,000 compared with 206,000 today. There were no shortages of dairy products; consumers could buy either industrially processed dairy products in small retail stores or individually-produced products in green markets. Industrial milk processing occurred in large, state-owned dairies, which were orientated to domestic production rather than exports.

1990s: The largest decrease in herd size occurred from 1993-1995, a time of hyperinflation and severe economic hardship that saw the number of cattle decline by half. The state attempted to intervene with producer subsidies, but they had minimal effect on farmers and were very expensive for government. The premium was intended to be paid to farmers by dairies, but in the end it was mostly the dairies that profited because by the time farmers did get paid (typically every two weeks), hyperinflation made the amount they received for their milk worth almost nothing. In the end, farmers stopped selling milk to the dairies and began home-production of white cheese and other products they could sell locally. The prices farmers got for these products were higher and, more important, they received cash on the spot, which they could convert to hard currency or use to purchase other household items. As it became less profitable to produce milk, many farmers simply slaughtered their cattle and stopped producing milk. Processors also were impacted and very quickly reduced their operating capacity to 30 percent or less. Large state farms could not afford to buy or prepare fodder for their cattle and they also started selling or slaughtering them. The State could do little—managing its own affairs had become increasingly difficult and strategizing the recovery of the agriculture sector was all but impossible. The financial hardships that resulted from the dairies becoming insolvent continued through privatization and beyond.

2000s: The renewal of herd sizes began in 2000-2001 when the country re-opened and privatization ensued. Donors supported farmers in developing associations and in 2001, the Association of Simmental Cattle Producers was formed. There followed a new, more serious and strategic approach to farming, consumers began spending more freely, and commercial credit opportunities opened up. Small private dairies started to mushroom throughout the country as entrepreneurs with experience and capital saw an opportunity to fill the gap left by the collapse of large state-owned dairies, which began their own process of privatization and rebuilding through local and foreign investment. In 2004, the state began introducing programs to revitalize the agriculture sector, including Agriculture Development Funds financed by the MoA and administered at the municipal level; 50-50 matching investment programs for mechanization and herd increases; and improved communication and outreach to registered household farms.

III. VALUE CHAIN ANALYSIS

DAIRY SUBSECTOR

ANALYSIS OVERVIEW AND DATA

The data used in this section are taken primarily from the monitoring and evaluation report, *Dairy Sector Value Chain & CRDA Impact Assessment, Southern Serbia 2001-2007*, a Mercy Corps evaluation of the USAID-funded CRDA project released in July 2007. The report assesses the dairy subsector and CRDA interventions in southern Serbia, examines critical links in the value chains—production, collection and transport, processing and sales and marketing—and presents a situation assessment as well as the impact, results and findings of Mercy Corps interventions in the dairy subsector.

SERBIA NATIONAL DAIRY SUBSECTOR

DAIRY SECTOR OVERVIEW

The dairy subsector is a key strategic sector in Serbia’s economy, both in terms of its contribution to the economic well-being of rural households and its role in national-level policies. At the local level, the dairy subsector supports an estimated 143,000 farming households, 233 registered dairy processors and their employees, and all the other value chain input suppliers and supporting actors. At the national level, agriculture accounts for 25 percent of GDP and 26 percent of exports and dairy is one of the most important subsectors, accounting for 33 percent of the MoA total budget.

Serbia National Dairy Production Statistics						
Region	Cows per Household	Avg. Yield (L/cow)	Annual Production (ton/farm/yr)	Milk Production %	Herd %	Households %
Northern Serbia	4.5	12.06	16.72	36%	28%	21%
Central Serbia	3.5	10.13	11.23	42%	40%	37%
Southern Serbia	2.5	6.75	5.01	22%	32%	42%
National	3.5	9.65	10.99	100%	100%	100%

There are significant differences between milk production in the more economically developed regions of northern and central Serbia compared to southern Serbia. Despite having the largest number of dairy households, southern Serbia has a much smaller percentage of total production due to factors such as unfavorable geographical conditions, small landholdings, low household incomes and weak support institutions. This case study compares the results of post-conflict, processor-level interventions in southern Serbia with farmer-level interventions, primarily in central Serbia.

DAIRY IMPORTS AND EXPORTS

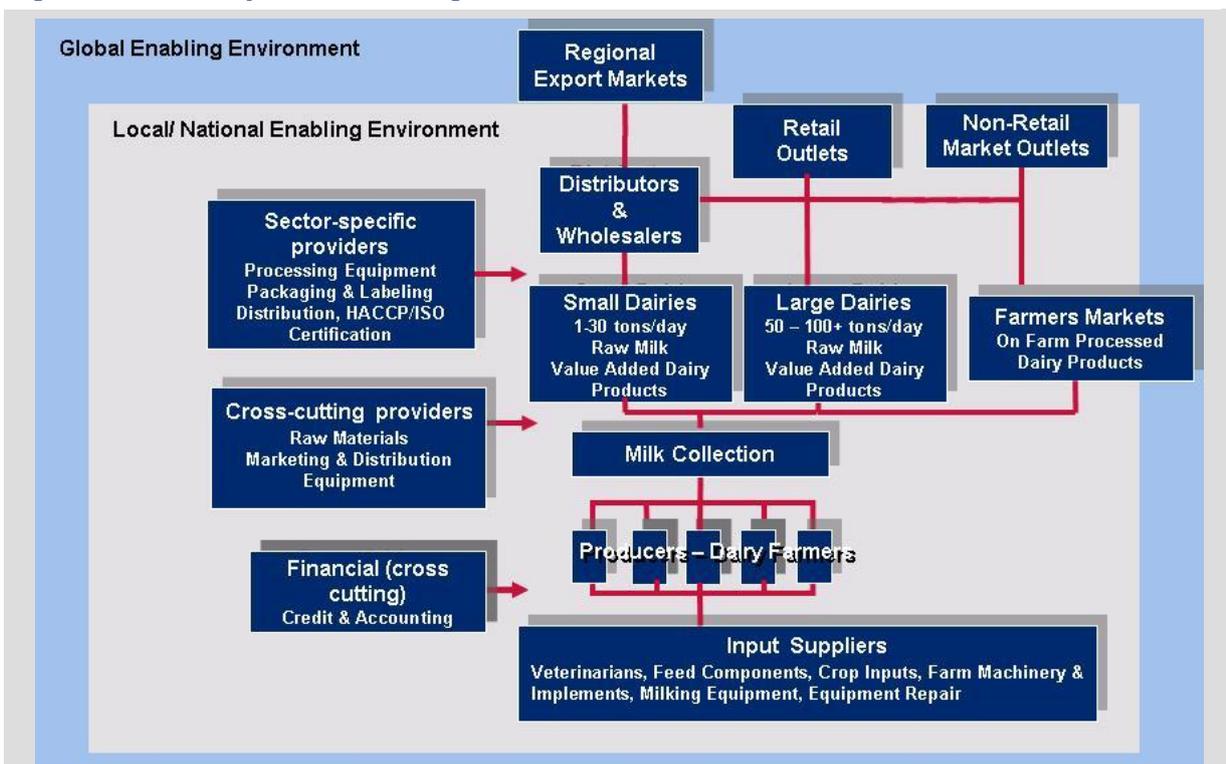
The value of dairy imports from January through September 2006 was 4.8 million euros while the value of exports was 5.3 million, representing a 13 percent trade surplus for processed dairy products. However, this statistic is somewhat misleading as 53 percent of all dairy exports (mostly fluid milk) are to Montenegro, which seceded from the State Union of Serbia and Montenegro in May 2006, thus becoming an official recipient of exports. The majority of imports, 86 percent, are from outside the former Yugoslavia. Five countries, Poland, Germany, Croatia, Belgium and Italy (listed in highest import level) account for 75 percent of all imported dairy products into Serbia. The most imported dairy products include, in order, flavored yogurt (23 percent), whey products, fermented products, cheese and fluid milk.

DAIRY VALUE CHAIN DESCRIPTION

SUMMARY

This section presents an overview of the Serbia dairy subsector (2006-2007) current situation. It includes a short narrative overview of key value chain actors, beginning at the lowest level, the milk producers and proceeding through to the end markets. Most of the data is taken from 2006 sources, the most recent available at the time of writing.

Figure 3: Serbia Dairy Value Chain Diagram



The Serbia dairy value chain is a fairly traditional value chain structure that is organized around processors who control the flow of milk. Most processors in Serbia process less than 30 tons/day, producing value-added products like yogurt and cheese. They compete with five large-scale processors who process over 100 tons/day and account for 47 percent of Serbia's dairy processing capacity.

MILK PRODUCTION

There are an estimated 143,000 farms with 456,000 dairy cattle producing 1.6 million tons of milk per year in Serbia. Of this, 84 percent is produced in lowland areas and 16 percent in the highland areas of southern and southwestern Serbia. Not surprisingly the majority of milk comes from the more economically developed regions of central Serbia (42 percent) followed by northern Serbia (36 percent) and southern Serbia (22 percent). There are approximately 50 large farms with average herd sizes of 135 cattle, mostly located in Vojvodina and around Belgrade. The average dairy farm in Serbia, however, is much smaller with an average herd size of only 3.5 head. The average yield per cow is 9.65 L/day, compared with yields of 13.2 L/day on large farms.

RAW MILK ALLOCATION STATISTICS

In 2005, 54 percent of total milk output was sold to dairies (814,000 tons from 70,000 producers), 26 percent was consumed for household use, and 20 percent was home-processed into various products and sold in village and town green markets. In 2006 sales to dairies fell nearly 10 percent to 45 percent; only in Vojvodina region did the quantity of milk sold to dairies increase. Part of the rationale for a decrease in sales to dairies includes the fact that some dairies have ceased operating (there are 233 registered dairies with about 200 full-time

operational) and that increased quality standards as the industry moves toward HACCP standardization has resulted in a deficit in high quality raw milk in some areas.

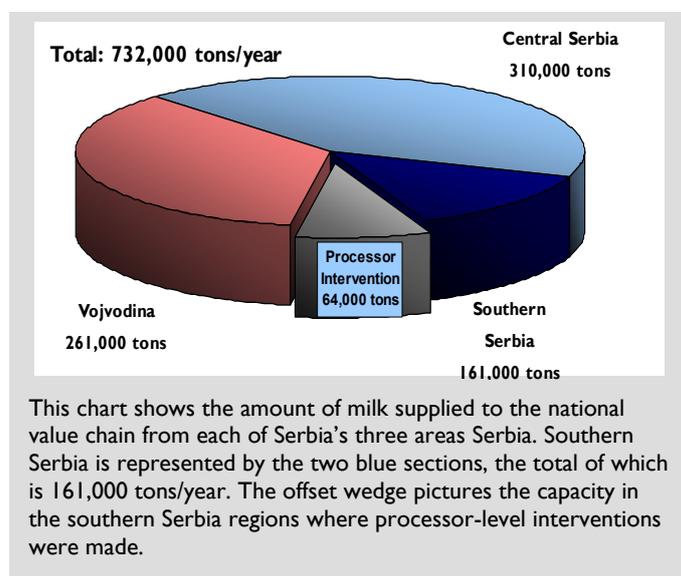
ALLOCATION INTERVIEWS

While national statistics show this decrease in sales to dairies, key informants and other interviewees did not raise the issue. In general, almost all interviewees reported increased sales of raw milk to dairies. Another possible explanation is the rising price of inputs and relatively constant price of raw milk until September 2007. To support this, some farmers the team interviewed stated that this did in fact cause them to begin some on-farm processing of milk into various products. With respect to the regional disparities; due to large herd sizes (and size increases) in Vojvodina (northern Serbia) it is more profitable for producers of higher quantities to sell to dairies. Also, most state assistance for agriculture is directed toward Vojvodina because of its strategic role in Serbian agriculture.

DAIRY PROCESSING

The amount of raw milk processed in Serbia in 2006 was 2,005 tons/day (732,000 tons/year) in approximately 200 dairies nationwide (see Figure 4). (The Opto International *River of Milk* project estimated the figure of 200 though there are 233 dairies officially registered, 72 of them verified. However, Opto says that there likely are 200 operational dairies.) Dairy processing in southern Serbia represents a relatively minor portion of this national total (160,679 tons/year, or 22 percent) despite being home to 38 (53 percent) of the operational dairies. The southern Serbia municipalities where the Mercy Corps CRDA program operates account for 9 percent of milk purchased by dairies though they are home to 28 percent (20) of the country’s operational dairies. These statistics support the need for small dairies to remain competitive through niche products and branding though it also could indicate a possible consolidation of the dairy processing industry.

Figure 4: National Dairy Processing 2006—Milk Sales to Dairies (tons/year)



Regional Dairy Processing Statistics						
Regions	Producers	Cows	Tons/Year Sold to Dairies	Avg. Tons/Day Sold to Dairies	National Output %	Average L/cow
Northern Serbia	13,219	58,292	260,788	714	35.6%	4,454
Central Serbia	24,111	82,569	310,435	851	42.4%	3,358
Southern Serbia	27,047	64,157	160,679	440	22.0%	2,467
Total	64,377	205,018	731,902	2005	100%	80,931

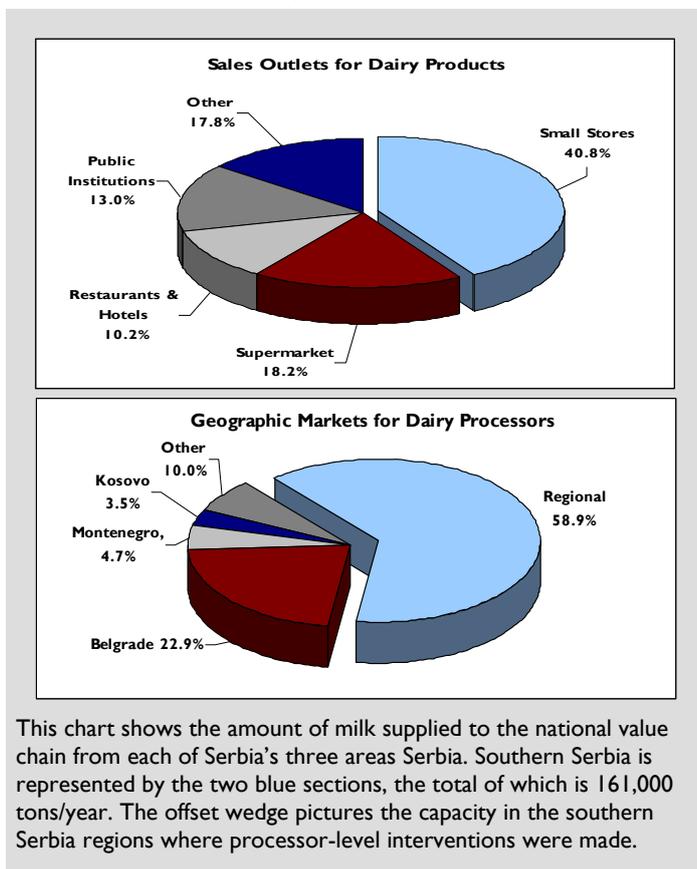
DISTRIBUTION

Based on surveys and the CRDA Impact Assessment, 70 percent of dairies self-distribute their products directly to market outlets. The remaining 30 percent use private distributors for some share of distribution. Of those who distribute their own products, most own a fleet of refrigerated trucks, typically three-ton capacity. All of the surveyed dairies that use private distributors are satisfied with the business relationships they have with their distributors though they cited a few common problems such as i) poor roads, ii) inadequate transport vehicles and iii) difficulty in getting paid and a lack of cooperation by some buyers.

SALES OUTLETS

The largest market outlet for most dairies is individual small stores (41 percent). Over half of the dairies distribute some of their products to supermarkets, accounting for 18-20 percent of total sales (see Figure 5). While supermarkets have a much smaller market share of the food retail industry than in other eastern European countries, several domestic and a few international supermarket chains have spread to nearly all medium and

Figure 5: Geographic Markets and Sales Outlets Markets for Southern Serbia Dairy Products



large towns in Serbia. When questioned about doing business with the large supermarkets, nearly half of the dairies complained of bad payment and contractual conditions, citing payment delays (sometimes as much as six months), no quantity guarantees and prohibitively expensive shelf space pricing.

GEOGRAPHIC MARKETS

Geographically, the end market for most of dairies is in regional markets (59 percent) situated in close proximity to the processors. The increased use of external distributors has seen an expansion of geographic coverage for some processors, helping them access new markets even as it increases competition in those markets. The next largest market is Belgrade, which represents 23 percent of the total market even for processors in southern Serbia (see Figure 5). This also demonstrates that the dairies in southern Serbia are competing with the large processors in Vojvodina and around Belgrade. Other geographic outlets for southern Serbian processors in Serbia include eastern Serbia and Vojvodina.

EXPORT MARKETS

Export markets account for 15-20 percent of geographic outlets and include Macedonia, Croatia and Montenegro. While exports make up a relatively small portion of overall sales, there is high interest in international markets, most likely due to the increasing competitiveness of regional and national markets. Eight of the 19 dairies surveyed in southern Serbia (42 percent) express interest in reaching EU markets and six (32 percent) are interested in export opportunities in the FRY within the next three years. It is noteworthy that three of the larger dairies have significant sales to Kosovo and one of the three, Zornic Dairy in Tutin, also exports 25 percent of its products to Montenegro. As a recent member of the Central European Free Trade Agreement (CEFTA), export markets in the western Balkans are easier to access than trying to navigate the EU tariff and non-tariff barriers.

LARGE DAIRY PROCESSORS

Five dairies operating in and around Belgrade and Vojvodina have a processing capacity over 100 tons/day and account for 47 percent of all milk processed in Serbia. Several of the largest dairies belong to the Danube Food Group, a consortium of four dairies owned by the Salford Group, a British private equity firm. The largest dairy in the Danube Food Group is Imlek, which accounts for 30 percent of all commercially processed milk in Serbia and has a capacity of 700 tons/day and an annual turnover of 130 million €. In the last three years, Imlek has

invested 30 million € in processing capacity.⁶

MARKET SHARE

Surprisingly, over half of the dairies surveyed say they are not experiencing a loss of market share to larger dairies such as Imlek and say the reason for this is that large and small dairies compete for different markets. The small dairies feel they can remain competitive on price with cost-conscious customers and specialize in niche products such as peppers in cream and kajmak, a salted butter commonly used as a spread in Serbia, even though sales of specialized products remain marginal. In effect, the dairies absorb lower margins for basic dairy products, such as fluid milk and yogurt and make up for that through higher margins on their specialized products.

Main Problems with Sales & Distribution (19 Processors Surveyed)

- Payment Collection 13
- Inadequate Transport Vehicles 5
- Other Distribution Problems 6
- Price Stagnation 3
- Market Competition 2
- Black Market Competition 2
- Supermarkets 1
- Small Range/Quantity of Products 1
- Lack of Skilled Employees 1
- Disposable income of customers 1
- Infrastructure 1

COMPETITION

With more dairies entering the market, competition for shelf space is increasing and small dairies are challenged by contracts that stipulate payment will not be made for unsold products, forcing them to produce exactly the right amount of product for each buyer. This is not the case with larger dairies in Serbia that are able to negotiate more favorable payment terms. Dairies also mentioned gray market competition as a problem, citing competitors who underreport earnings and/or employees, thereby creating unfair competition. There are a number of small visionary dairies that express interest in associations, but this is still very far from an actual realization of the idea.

PAYMENT PROBLEMS

By a significant margin, the leading problem facing dairy processors with respect to sales and distribution is collection of payments from sales outlets and retailers (68 percent of dairies cited this as a key problem). Many dairies are unable to collect payments due to the instability of convenience store outlets. Many small shops are unable to pay regularly because of low cash flow and the diversion of funds to pay for rents, utilities or family emergencies. This leaves dairies to accumulate large accounts receivable.

KOSOVO DAIRY SECTOR

The dairy sector in Kosovo is far more underdeveloped than that in Serbia and operates under completely different market and enabling environment conditions. Nearly all of the value-added food products sold in Kosovo supermarkets and shops are imported and, with the exception of simple dairy products such as fluid milk and white cheese, the dairy sector is no exception. The state of the Kosovo dairy sector is considerably far behind that of surrounding countries and suffers from a lack of quality and safety standards, low demand, and a bad reputation for its products. Kosovo dairy processors have a difficult time competing even in their own markets because of the lack of milk subsidies, which, when coupled with the poor state of the entire sector, contributes to a widespread practice of dairies using a high degree of powdered, rather than fluid, milk for production of dairy products, which further limits the amount of milk they purchase from local farmers.

⁶ Vibia Press Clipping Service, March 26, 2007.

ENABLING ENVIRONMENT

NATIONAL LEVEL AND GOVERNMENT SUBSIDY PROGRAM

The MoA subsidy program for raw milk reflects the importance of the dairy sector for the national economy. In 2006, the MoA paid a subsidy of 4 RSD/L (about 20 percent of the farmgate price) per liter of milk for households in the highlands selling milk to dairies, and 3 RSD/L in lowland areas, a drop from the 2005 subsidies of 4.5 and 3.8 RSD respectively and representing an annual savings for the MoA of 10 million €⁷. Despite this reduction, subsidies continue to account for a significant portion (25 percent) of the MoA budget, 28 million € in 2006 (versus 40 million € in 2005). As Serbia moves politically and economically closer to the EU, milk subsidies will continue to decrease and it is expected that they will shift from a basis of fat content to quality once a system of national laboratories for the quality control of milk and dairy products is established.

PAYMENT SYSTEM AND CRITERIA

At present, producers are paid for fat content, though some are offered premiums for volume and/or use of a lacto-freezer. Salford recently introduced bacteria count as a criterion for price determination. The MoA key informant stated that the new law will make it obligatory for all dairies to consider bacteria count when establishing raw milk prices.

LEGISLATIVE ISSUES

Most of the legislative constraints cited by value chain actors were with respect to the MoA dairy farmer subsidies. While dairies feel that subsidies provide a strong incentive to farmers, they also believe that subsidies must be restructured around milk quality rather than fat content. Respondents also said that the *Law on National Laboratories* must be passed in order to set proper regulatory standards for dairy processors and that the subsidy system should place an additional administrative burden on dairy processors, as subsidies are paid to farmers via dairies and this should be the responsibility of the MoA or local government.

Current Dairy Industry Legislation	
Positive	Negative
<ul style="list-style-type: none">• Premiums for dairy producers stimulate milk production.• Subsidies for HACCP Certification.• Small dairies do not need full-time laboratory technician.	<ul style="list-style-type: none">• Raw milk subsidies should be made directly to farmers, not via dairies.• No <i>Law on National Laboratories</i>.• Producer subsidies paid on quantity and fat content, not quality.

VALUE-ADDED TAX

Many distributors interviewed for the study cited the introduction of the Value-Added Tax (VAT) as a key point in stabilizing markets and allowing a healthy retail sector to grow as it eliminated, or at least drastically reduced, the gray market and unhealthy competition. Distributors say that since the introduction and enforcement of the VAT system, their businesses have been allowed to grow as the gray market economy (general wholesalers trading illegally by avoiding taxes) has been eliminated.

SUPPORT MARKETS

HACCP

Hazard Analysis and Critical Control Points (HACCP) is a systematic approach to food safety that addresses physical, chemical and biological hazards through prevention rather than finished-product inspection. HACCP is used internationally throughout the food industry to identify and eliminate potential food safety hazards by

⁷ At an exchange rate of 55 RSD to 1 USD, 4 RSD is equivalent to \$.72 cents. With the farmgate price averaging 20 RSD/liter in 2006 (including the government subsidy) the subsidy accounted for 20 percent of the total farmgate price.

examining the process and identifying all *Critical Control Points*, places in the process where hazards can be introduced or quality disrupted. To become certified, processors need to identify these points in the process and install the necessary controls and procedures that eliminate or minimize the risk to an acceptable level. HACCP certification is now required for all food products imported into and sold in EU member states. It is a necessary requirement for any Serbian food processor with export aspirations.

ISO 9000 OVERVIEW

ISO 9000 refers to a set of quality management standards; ISO 9000 currently includes three standards: ISO 9001:2000 presents requirements, while ISO 9000:2005 and ISO 9004:2000 present guidelines. All of these are *process* standards, not *product* standards. ISO 9000 is maintained by the ISO, the International Standards Organization and is administered by accreditation and certification bodies. ISO's purpose is to facilitate international trade by providing a single set of standards that people everywhere recognize and respect. The standards apply to all kinds of organizations in many different areas, including food processing.

HACCP AND ISO 9000 CERTIFIED PROCESSORS

Of 19 dairies surveyed, 8 have received both HACCP and ISO 9001 certifications, three are in the process of certification, and five more have plans for certification. Only one indicated that it did not have plans for certification. These numbers are positive since as recently as 2005 only a few dozen companies in Serbia had either of the two certifications. Quality certification is now a critical issue for dairies and the MoA has set a deadline for all food industry companies to be HACCP certified by January 2009. Meeting the upcoming HACCP deadline requires dairies to invest significantly in upgrading equipment and facilities. To date, dairies have invested an average of 24,000 € in HACCP and ISO 9001 certification; CRDA partners have subsidized training costs; and MoA has paid 80 percent of certification costs.

MOA CREDIT

Credit made available by the Ministry of Agriculture is tailored to assist farmers, offering favorable terms including low interest rates (see table). Typically, MoA credit must be used for a specific capital investment while bank credit can be used for operating capital. While most farmers are eligible to apply, it is very competitive. The MoA budget is also much smaller than the pool of funds available from commercial banks, so although most farmers are eligible to apply for a MoA loan and would prefer it to a bank loan, it is simply too competitive for all of them to receive one. In a few cases, farmers and dairy processors were approved for commercial credit and shortly thereafter were approved for a MoA loan and returned the commercial funds. Generally, most farmers find bank credit to be unaffordable and the conditions unfavorable.

PRODUCER FINANCING

Few farmers in southern Serbia use credit and only 22 percent of those surveyed had ever applied for a loan. Of those, the majority submitted applications to the MoA because of the favorable conditions. Despite being more affordable, MoA credit proved more difficult to obtain than bank

Producer Credit History in Southern Serbia (212 Dairy Farmers)			
Type of Credit	Producers	Approved	Not Approved
Never Applied	165		
Applied for MoA Credit	28	12 (43%)	16 (57%)
Applied for Bank Credit	19	18 (95%)	1 (5%)
Main Reasons for Not Applying for a MoA Loan			
<ul style="list-style-type: none"> • Insufficient Information (47 percent) • Loan Approval is Corrupt Process (20 percent) • Inability to Repay Loan (14 percent) • Bad Credit Terms (13 percent) • Application Process Complicated (12 percent) 			
Main Reasons for Not Applying for Bank Loan			
<ul style="list-style-type: none"> • Bad Credit Terms (99 percent) • Skeptical of Obtaining Loan (14 percent) • No Need for Credit (8 percent) 			
Only 22 percent of farmers surveyed have applied for credit for their operations. While considerably more of those applied through MoA, the approval rate was lower than with commercial banks. MoA terms are 100,000-500,000 RSD, 5 percent APR, one year. Commercial banks vary from 1,000€ - 10,000€, 6-17 percent APR, one year. (Exchange 81 CSD/€).			

loans: only 43 percent of borrowers succeeded in obtaining MoA credit, compared to 95 percent approval by commercial banks. Credit provided through banks was typically larger on average (4,530 €) than that through the MoA (3,820 €).

PROCESSOR FINANCING

Not surprisingly, most southern Serbia dairies began their operations using their own capital because the banking sector and government were financially crippled by international sanctions and the NATO bombing in the 1990s. Since then a majority of dairies have applied for credit through commercial banks to expand their operations and prepare for new industry quality standards. All of the dairies surveyed that applied for loans during the past five years received credit from banks at a fairly reasonable interest rate of 12 percent. Despite this, dairies still complain that it is a problem to receive outside capital and that the loan terms are not favorable.

Processor Investment Summary in Southern Serbia (19 Dairy Processors)	
Start-Up Capital	18 of 19 invested own capital
Profit Reinvestment	71%
MoA Credit	Applied: 4 Received: 2 Pending: 1
Bank Credit	Applied: 10 Received: 10
Long-Term Loan (avg.)	30,000 EUR, 12% Annual Interest, 3 years
Short-Term Loan (avg.)	29,000 EUR, 2.13%/month, 6-12 months
Greatest Problems for Accessing Outside Capital	Unfavorable Terms (56%) Difficult to Acquire (39%) Banks more interested in personal loans. No MoA credit for startups. Limited to Limited Liability Partnerships. Too much paperwork. Difficult to obtain information.

INFORMATION SOURCES

Farmers surveyed indicated that their main sources of information about the dairy industry are through the mainstream media channels that provide news and sometimes educational programming. Farmers also reported personal contacts, dairy processors, and milk collectors as important information sources. Trainings and seminars organized by associations and the MoA, as well as MoA-disseminated information also were cited. In addition to the annual MoA agriculture bulletin provided to all registered agriculture households, the ministry manages a network of extension agents, though in general there are not enough to cover all of Serbia. In addition, the MoA regularly distributes information through national media outlets from Belgrade.

OPPORTUNITIES AND CONSTRAINTS

DAIRY INDUSTRY GROWTH

In southern Serbia, the dairy industry has experienced impressive growth since 2002 as small private companies have filled the market gaps left behind by state-owned food processing companies that collapsed in the 1990s. Since 2002, raw milk processing has grown by 174 percent and income from sales by 507 percent though this is due partly to the very low capacities that existed before then. Opportunities for growth lie in diversifying product lines to compete with current imports on price. In 2006 the value of imports was over \$6 million and consisted mainly of flavored yogurts, specialty cheese and fluid milk.

OPERATIONAL EFFICIENCY

Despite this growth, the average dairy in southern Serbia is operating at an average utilization of only about 57 percent.⁸ While working capacity has increased dramatically (209 percent), the rate of utilization has increased only from its 2002 level of 51 percent to the current level of 57 percent. A major reason for this underutilization is that many new, small dairies have entered regional and local markets, increasing competition for similar products; another is the inadequate quantity and quality of raw milk supplies due to the large percentage of smallholder farms in southern Serbia. While the number of dairies in southern Serbia is high, representing up to

⁸ i.e., working capacity as a percentage of design capacity

one-third of all operational dairies in the country, production accounts for a disproportionately small share of 22 percent.

DAIRY PROCESSING CONSOLIDATION

Small dairies face an unsure future in the industry and experts think the sector is facing an inevitable consolidation of processors as larger, more efficient dairies, distribution and retail outlets force small dairies out of the market. When asked to rank on a scale of 1-5 how optimistic (5 being very optimistic) they were about their future and the future of the dairy industry in Serbia, dairy owners responded cautiously, scoring, on average, 2.98. When evaluating the industry as a whole, dairies responded with a mix of positive and negative comments. On the positive side, dairies feel that the quantity of raw milk is increasing as farmers become more educated and professional in milk production and they think market opportunities are expanding. Some wholesalers feel there are not too many dairies in Serbia, stating that Imlek is actually losing market share as smaller dairies compete successfully in terms of price, quality and product offerings. While there have been some initiatives to form dairy processor associations, notably current efforts by the Reka Mleka project, in general, dairies have been averse to any form of association due to the failure of cooperatives during Serbia's socialist era.

REGIONAL MARKETS

Regional markets for small dairies are becoming very competitive. Dairies in southern Serbia sell 65 percent of their products in regional markets and 41 percent to small shops. Since 2001 the number of dairies has grown significantly. To remain competitive in such a marketplace dairies must either seek to develop new product lines, expand to new markets in larger cities in Serbia, or begin developing export markets in surrounding countries. Donors can help dairies by providing marketing expertise for accessing new markets; conducting and disseminating market analyses that assess markets based on geography, products, branding and marketing; and assisting local companies with marketing their products through regional and international trade fairs.

DAIRY MANAGEMENT

Dairy owners and operators need more professional management. A lack of skilled and educated employees was cited as the top production problem in all three regions assessed. A primary reason for the lack of skilled labor is that the dairies have resisted hiring professional managers to handle specific functions of the business such as marketing, operations or finance. Owners prefer to have themselves or family members make operational decisions, which restricts their ability to effectively manage, train and educate employees for management positions. Consequently, management is overburdened, lacks numerous skills, and has little time to focus attention on specific business needs.

DAIRY PROCESSOR CONSOLIDATION

Dairy processors cite poor quality and low quantities of raw milk as a major production problem and constraint to growth. The average dairy in southern Serbia collects milk from over 500 individual households (some as many as 2,000) and yet 74 percent of dairies still face milk shortages in winter. The two major reasons for the seasonal shortage are 1) cows generally calve in spring and do not produce milk in winter, and 2) poor roads and inadequate snow clearing limit access to farms during winter. Milk collection from small farms dramatically increases operational costs and puts a significant logistical burden on dairies and it also negatively impacts quality control as traceability and standards are more difficult to employ. Because of these supply problems, some dairies have begun investing in their own farms to better control the quality of their raw milk supply and to lower collection costs. While none of the dairies surveyed intends to become 100 percent vertically integrated, some have made such investments in addition to, or in lieu of, improvements in collection and quality control to lower collection costs and perhaps because they feel they have more control over management of their investment.

DAIRY FARM CONSOLIDATION

Despite growing herd sizes in recent years, there still are large numbers of small farmers with 1-3 cows (50-60 percent of households) providing milk to dairies. Some MoA experts and consultants hired by MoA to provide training and consulting services believe that most of those will cease to exist within the next 10 years and farmers will need a minimum of 20 head of cattle to remain competitive. Since Serbia does not have particularly favorable geography and infrastructure for establishing and sustaining large farms, short-term plans should focus on creating medium-sized farms. A serious constraint to creating medium-size farms or growing small farms is the unresolved policy of land ownership. A serious producer needs one hectare of land per cow, which means some farms will grow, but many will disappear.

ORGANIZED COLLECTION POINTS AND COLD CHAIN

A majority of farmers (84 percent) are not selling milk through organized collection points, but instead use the services of a processor or collection company to collect raw milk directly from the farm. This results in poor storage of milk and a high bacterial count and an overall reduction in quality, as well as inefficient and expensive collection costs for dairies. Most dairy farmers in southern Serbia have no access to lacto-freezers due to the high initial capital investment required. This is a serious concern for milk quality, as only 22 percent of farmers have access to lacto-freezers that allow them to cool and store their milk before it is collected. The majority of farmers store their milk in metal or plastic cans on the side of the road awaiting collection from a processor or collection company.

RAW MILK QUALITY AND COLLECTION

While most small private dairies do not have the necessary equipment to test milk quality during pickup, many of those interviewed stated that they had managed to improve raw milk quality through control measures at the producer or pickup sites. Dairies must either invest themselves, or hire better-equipped collection providers, to improve on-farm cooling, storage and transport of raw milk. Only one dairy owns a refrigerated collection truck and only 21 percent of dairies surveyed have registered collection points. If dairies cannot afford the necessary investment, they should consider using private collectors with cooling equipment or investigating leasing options, though dairies also express difficulties in finding reliable and trustworthy collectors.

PRODUCT DIVERSIFICATION

Dairies must begin to innovate and diversify their products if they are to remain competitive. All of the dairies surveyed produce similar products: fresh milk, yogurt, yellow cheese and cream cheese. Individual market share for all four of these products has dropped of late as regional markets have become more competitive. Local and specialized products make up a very low percentage of sales and there are few initiatives to diversify into niche products. In order to continue growing their markets, small dairies should conduct market research to expand production into niche products and invest in technology, education and new product marketing.

CONFLICT RESOLUTION AND VALUE CHAIN COMPETITIVENESS OPPORTUNITIES

SUMMARY

Many industry experts think the Serbian dairy sector will be forced to consolidate at both the producer and processor levels. At the producer level, they state that small farmers will be forced to either expand or stop selling milk to dairies and that farms with fewer than 10-15 head of cattle will be unable to compete. At the processor level, many experts feel that there are simply too many dairies in Serbia and competition will put many of them out of business as larger dairies become more competitive and benefit from economies of scale. On the other hand, many small dairies are well positioned with established markets, good reputations, HACCP certification and viable product assortments. The sentiment of the majority of small dairies is that: i) small dairies

operating in geographically distant areas and in minority ethnic areas will survive because large national dairies have no interest in penetrating those small and distant markets; and ii) small dairies face competition mainly in basic dairy products and those that produce regional specialties can remain profitable.

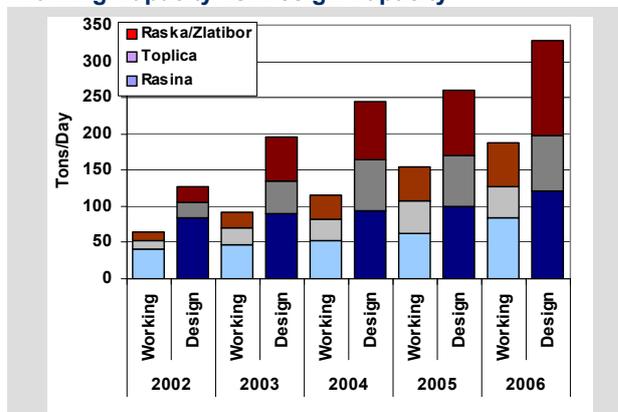
DAIRY IMPORT AND EXPORT

Given this current state of the dairy sector, dairies will continue to maneuver and compete for expanded local markets; those that can remain most competitive will succeed and perhaps even grow. As a sector, however, most new opportunities likely lie in exporting and import substitution. On the import side, Serbia continues to import 6.4 million € worth of dairy products, primarily from Poland, Germany, Croatia, Belgium and Italy, which together account for 75 percent of all imported dairy products. Thus, import substitution presents considerable opportunities for the dairy sector. While Serbia has a trade surplus of dairy products and exports valued at 7.1 million €, this is somewhat misleading as 53 percent of all exports (mostly fluid milk) are sent to Montenegro, which seceded from the Federation in May 2006, becoming an official export recipient.

DAIRY PROCESSING CAPACITY

Another big incentive and competitive advantage that Serbia currently has is a surplus of processing capacity that can allow the industry to grow considerably without a large investment at the processor level. If dairies successfully expand their markets and producers continue to grow, consolidate and become more efficient, the industry can grow quickly and cost-effectively. The chart shows the growth in working capacity (actual processing level) versus design capacity (maximum processing capacity) from 2002 through 2006 for dairies in southern Serbia. While both working and design capacities have increased, the percent utilization has remained relatively constant, increasing only from 51 percent to 57 percent. Thus, in 2006 there is approximately 190 tons/day of underutilized processing capacity available given sufficient raw milk supply and market demand. Anecdotally, in the ethnic minority region of Sandzak this seems to be a marketing problem and in the rest of southern Serbia, a raw milk supply problem.

Figure 6: Southern Serbia Dairy Processing Capacity Working Capacity vs. Design Capacity



Southern Serbia has seen dramatic increases in dairy processing capacity—design capacity has increased 174 percent and working capacity 208 percent. At the same time, percent utilization has increased only slightly from 51 percent to 57 percent. Percent utilization is the highest in Rasina (69 percent) due at least in part to its more developed collection infrastructure, particularly during winter months. CRDA investments directly accounted for 23 percent of the 2004 design capacity.

OPPORTUNITIES IN KOSOVO

Kosovo presents a considerable opportunity for Serbian dairies given its current low productivity and dependency on imports. With Serbia's underutilization of processing capacity, strategic positioning of many processors close to Kosovo and consumer demand by 2 million-plus inhabitants, Kosovo is a very attractive market. In addition to opportunities for primary dairy products, there also are opportunities for quality training and certification bodies (none of which exist in Kosovo); technical, marketing and organizational consultants; input suppliers; and the rest of the service and support structures that comprise the dairy value chain. Given these conditions, one can easily imagine how Kosovo's dairy industry might present opportunities for Serbian value chain actors. Until the status of Kosovo is determined, however, and both sides have peacefully accepted the outcome, cross border trade will continue to suffer.

DAIRY SECTOR IN CONFLICT RESOLUTION

While cross-boundary trade has the potential to repair relations between Serbia and Kosovo and contribute to peace efforts, donors, including USAID, are hesitant to support virtually any cross-boundary initiatives, except some in the Presevo Valley region, due to the political sensitivity of the final status negotiations. However, once Kosovo's status is resolved, donors should be ready to respond with activities that will support trade and relations between the two regions. At a simple level, cross-boundary exchange visits organized around particular sectors, activities or demographics can be sponsored and facilitated. Alternatively, a cross-boundary trade fair, with or without a sector focus, could be organized in the bordering regions to facilitate business across the boundary. These and similar initiatives should be backed up through macro-level initiatives aimed at reducing and simplifying trade and border restrictions.

IV. STATEMENT AND ANALYSIS OF CASE STUDY RESEARCH

Case Study Thesis: The objective of the Mercy Corps research was to evaluate the following hypothesis:

During the period of post-war reconstruction, targeted support to capable, value-added processors leads to a) faster market revitalization, and b) stronger market linkages within strategic subsectors, than directing economic assistance towards farmers or letting market mechanisms revitalize on their own.

In studying the above hypothesis, Mercy Corps responded to the following three research questions:

1. How can the value chain approach contribute to the rebuilding of markets in post-conflict situations?
2. How can end markets best be used to drive market upgrading and value chain strengthening in post-conflict situations?
3. How can strategic subsidies, including grants and/or vouchers, be used to lay the groundwork for an eventual transition to a market-driven economy?

Research Objectives: Mercy Corps undertook a combination of field surveys and desk research to support the following three primary objectives:

1. Compare the short- through long-term impact of two post-conflict value chain strengthening interventions—at the processor and farmer levels—with value chain sample groups that received no assistance. Value chain performance was measured against criteria in two major indicator categories: i) market revitalization and ii) market linkages. Value chains in dairy and meat subsectors were assessed. However, the meat sector analysis was only briefly reported in the final conclusions and recommendations due to the dearth of field data that the team was able to collect.
2. Conduct a situational analysis of value chain actors to determine the impact of the 1990s conflicts in Serbia and the region on the dairy and meat subsectors.
3. Draw relevant conclusions and recommendations for the two post-conflict value chain strengthening strategies in both ethnic majority and ethnic minority regions.

CASE STUDY METHODOLOGY

DONOR INTERVENTION STRATEGY

The data gathered for this case study was collected through field interviews conducted from August through October 2007 with value chain actors working during the post-conflict period of 2001-2004. A total of 14 value chain sample groups in the dairy subsector and five in the meat subsector were studied, each categorized in one of three groups for the purposes of this case study, according to the level of donor intervention in the value chain:

- i) Farmer-Level Intervention
- ii) Processor-Level Intervention
- iii) No Intervention

GEOGRAPHY

Field surveys and interviews focused on south and southeast Serbia to ensure that the comparative geographic and economic environments would be as similar as possible. The team surveyed dairy and meat value chain actors in 16 municipalities located in 8 Serbian administrative districts. Municipalities in these regions are relatively underdeveloped rural regions that are characterized by small, integrated farming villages raising livestock and cultivating a variety of fruits and vegetables. The region of Sumadija in south-central Serbia (the dark blue region in the map covered by ACDI/VOCA) is relatively more developed with better infrastructure and more processing capacity than the other regions.

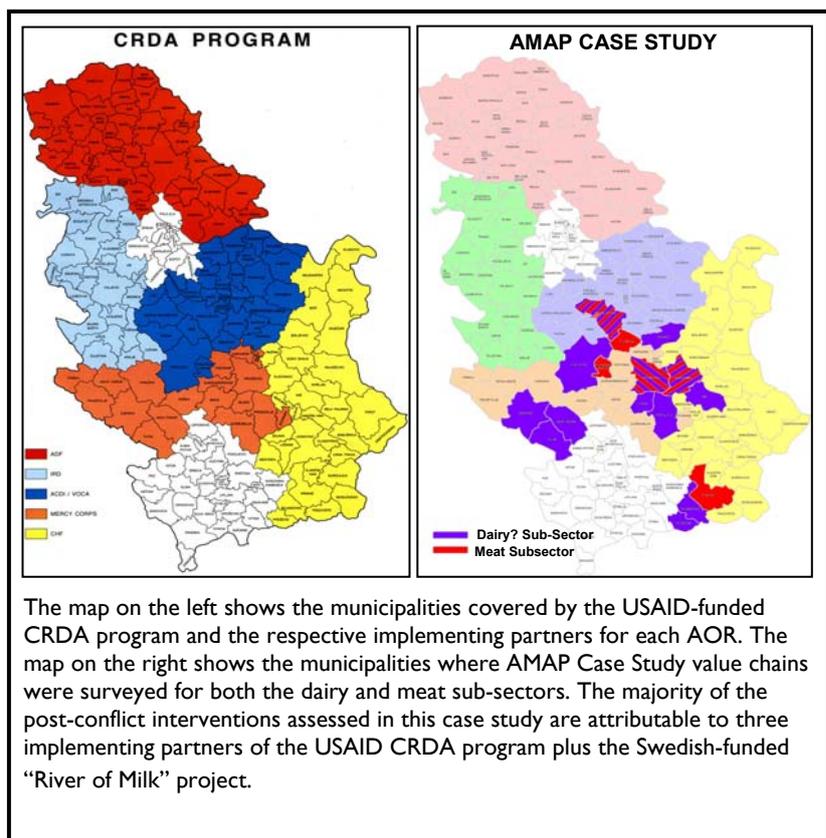
ETHNIC MAJORITY AND MINORITY REGIONS

The farmer and processor intervention groups consisted of six sample groups each in Serbian ethnic majority and minority regions, while the two non-intervention sample groups were surveyed only in the Serbian ethnic majority region of Sumadija, in central Serbia. The non-intervention sample group was smaller and did not include the minority regions, due to the fact that 100 percent of the sample groups in the two ethnic minority regions had received USAID assistance (there were no non-intervention groups).

SERBIAN ETHNIC MINORITY REGIONS

The team interviewed sample groups in the ethnic minority regions of Presevo Valley in southeastern Serbia and Sandzak in western Serbia (see Figure 7). These regions have exhibited a generally higher level of political and social insecurity and lower level of economic development throughout the post-conflict period. Since both regions are ethnically and geographically different, there are several external variables that must be accounted for when comparing the two regions. As previously outlined, Sandzak is a predominately Slavic Muslim region ethnically aligned with Bosnia and with a long tradition of sheep breeding, textile manufacturing and trade. The Presevo Valley, with its ethnic Albanian majority, is more politically unstable due to unresolved issues concerning Kosovo and the region is more economically depressed with smaller farms and lower levels of entrepreneurship.

Figure 7: Maps of Municipalities Covered by CRDA and Case Study



SURVEYS

A team of two Mercy Corps staff members, an interviewer and an assistant/note-taker, interviewed value chain participants for all three intervention groups in both the dairy and meat subsectors. The surveys examined four key areas: i) background of the value chain actor, ii) conflict operating environment, iii) post-conflict operating environment, and iv) post-conflict, donor-funded assistance. The surveys gathered quantitative analytical data and qualitative information for anecdotal support. All responses were coded and entered into spreadsheets for

analysis and compilation of statistical averages. In all cases, discussions of the conflict operating environment and post-conflict assistance were recorded and translated in full. The meat survey was a slightly shortened version of the dairy survey, focusing more exclusively on production and market demand indicators.

PARTICIPANT SELECTION

Survey interviewees were selected randomly from a pool of 38 identified sample groups that met subsector and geographic profiles, were commercially oriented, and whose primary source of income came from the dairy industry. A total of fourteen small and medium dairies were randomly selected from the pool of potential sample groups to represent the three value chain intervention groups: i) farmer-level, ii) processor-level, and iii) non-intervention.

SURVEY GROUP PARTICIPANTS

Interviewees for each value chain sample group were chosen around particular processors. In general, for each sample group, the team interviewed two dairy farmers, one dairy processor and one end-market buyer (though some exceptions were made). In total, as seen in the table, the case study team conducted 53 interviews with 26 dairy farmers, 14 dairies and 13 end-market buyers.

Dairy Subsector Sample Group Participants Interviewed				
Value Chain Actors	Farmer Level (6 Sample groups)	Processor Level (6 Sample groups)	Non-Intervention (2 Sample groups)	Total (14 Sample groups)
Producers	11	11	4	26
Processors	6	6	2	14
End Market Buyers	5	6	2	13
Total:	22	23	8	53
Ethnic Majority & Minority Regions Surveyed				
Ethnic Majority	3	3	2	8
Ethnic Minority	3	3	0	6
Total:	6	6	2	14

Dairy Processor Interviewees. Dairy processors included in the survey ranged in size from 2.5 to 50 tons/day in the ethnic majority regions, and from 0.5 to 11 tons per day in the ethnic minority regions of Sandzak and Presevo Valley. Each dairy recommended several of its more dependable raw milk suppliers, in order to ensure that farmers were commercially-oriented producers, from which the survey team randomly selected two per processor, resulting in a sample size of 26 dairy farmers (two of the original 28 were cancelled due to the team's inability to schedule interviews with them).

Dairy Farmer Interviewees. The interviewed dairy farmers reflected the range of Serbian dairy farmer, managing herd sizes ranging from 2 to 26 cows. When possible, the survey team included members of producer associations to allow for a broader industry perspective (61 percent of dairy farmers interviewed were members of a producer association). In the ethnic minority regions, however, the majority of the farmers were individual producers (42 percent were members of an association).

End Market Buyer Interviewees. The survey team interviewed 12 end-market buyers (2 of the 14 selected could not be scheduled), of which 5 are small retailers, 4 are large retailers and 3 are wholesalers. Only a few end-market buyers specialized in dairy products; most traded an assortment of food products.

FARMER-INTERVENTION SAMPLE GROUP SELECTION

In the ethnic majority regions, the team selected sample groups that received support at the farmer level through the Swedish International Development Agency (SIDA)-funded Reka Mleka project. The team randomly selected six farmers, all members of producer associations formed with Reka Mleka assistance in 2003-2004. Each of the six farmers sold their milk directly to local dairies in the Nis region. In the ethnic minority regions, the team selected six farmers in Presevo Valley who received support in 2003 through the CHF-managed CRDA program. The goal of those investments was to improve the economic security of households in the area by increasing milk production. The project provided 17 cows and 48 heifers and training and education in husbandry and fodder production to 65 households. All six farmers interviewed sell their milk to three different private dairies. The Presevo-Bujanovac Regional Development Agency assisted the team with selection and interviews.

REKA MLEKA PROJECT

The SIDA-funded Reka Mleka project, begun in January 2003, aimed to develop sustainable and profitable milk production in Nis and surrounding areas in southern Serbia. Over the course of the project, Reka Mleka assisted over 50 dairy producer groups through training and education in association management, milk hygiene and quality, feeding and forage production, and farm management. The program worked extensively with local partner institutions to deliver training, thereby building the capacity of local service providers in addition to association members. The project also had a micro-grant component for modern farming and production equipment, providing grants up to 10,000 € to associations.

PROCESSOR-INTERVENTION SAMPLE GROUP SELECTION

The team randomly selected three sample groups that received support at the dairy processor level from 2001-2004 through the regionally managed Mercy Corps CRDA program. The average investment was US\$53,946 in processing equipment and the average matching contribution was US\$45,526. The dairy sample groups were located in the southeastern Serbia region of Toplica (near Nis) and in the ethnic minority region of Sandzak.

NON-INTERVENTION SAMPLE GROUP SELECTION

Team members selected sample groups in south-central Serbia that received no donor dairy assistance under the ACDI/VOCA-managed CRDA. Despite having slightly higher levels of economic and infrastructure development, the region is comparable to the others in terms of ethnicity, geography and climate. The sample groups were identified through a random sample of dairies operating in the region. The team asked selected dairies to recommend two of their larger dairy farmers and typical end-market buyers, all of whom were subsequently interviewed.

CASE STUDY FINDINGS

This section presents the major findings from the dairy subsector in both the market revitalization and market strengthening indicator categories, followed by the individual results of each intervention group. While there is a significant amount of data presented, major findings are based on perceptions and opinions of sample group actors rather than statistical data.

FEW DIFFERENCES IN INTERVENTION PERFORMANCE IN POST-CONFLICT PERIOD

The case study results show noticeable differences in only 4 out of 17 performance indicators: dairy processing capacity, end market sales, increased farmer linkages and dairy business relationships. The processor-intervention and non-intervention sample groups had significantly higher increases in working capacity and farmer linkages than the farmer-intervention groups, while the farmer-intervention sample groups had stronger business relationships during the post-conflict period. The processor-intervention sample group also had the strongest end market sales from 2001-2004.

The minor difference in performance between the three intervention groups can best be explained by the later delivery of assistance between the farmer- and processor-level interventions. Dairy farmers surveyed in the farmer-intervention sample groups did not receive support until the second half of the post-conflict period (2003-2004); farmers in Presevo Valley were not able to begin milking CHF-donated pregnant heifers until the beginning of 2004; and Reka Mleka assistance in Nis, primarily technical assistance and training related mostly to feed, required several harvest cycles before yielding results, which pushed them into the transitional period. Several dairies in the processor-intervention group received support in the third and fourth years of the project (2003 and 2004) resulting in higher performance indicators during the transitional development period, 2005-2007.

Indicator Performance 2005-2007							
Dairy Subsector Value Chain Intervention Methodologies							
Average Rankings (1 = First Place, 3 = Last Place)							
Intervention Methodology	Market Revitalization Indicators			Market Linkage Strengthening Indicators			Overall Ranking (17 Criteria)
	Production & Sales (5 Criteria)	Quality of Production (2 Criteria)	Product Demand (3 Criteria)	Increased Market Linkages (2 Criteria)	Value-Chain Relations (4 Criteria)	Embedded Services for Farmers (1 Criterion)	
Overall Results							
Farmer-Level Intervention	2.25	2.50	2.33	1.50	1.25	1.00	2
Processor-Level Intervention	1.00	1.00	1.67	1.50	1.75	2.00	1
Non-Intervention	2.75	2.50	2.00	3.00	2.00	3.00	3
Ethnic Minority Regions							
Farmer-Level Intervention	2.00	1.50	1.67	1.50	1.00	1.00	2
Processor-Level Intervention	1.00	1.50	1.00	1.50	2.00	1.00	1
Ethnic Majority Regions							
Farmer-Level Intervention	2.25	3.00	2.00	1.50	2.25	2.00	2
Processor-Level Intervention	1.00	1.00	1.67	2.00	1.25	1.00	1
Non-Intervention	2.50	2.00	1.67	2.50	1.75	3.00	3

FROM 2005-2007, PROCESSOR-INTERVENTION SAMPLE GROUPS ACHIEVED GREATER MARKET REVITALIZATION TARGETS THAN FARMER-INTERVENTION SAMPLE GROUPS

During the 2005-2007 transitional period, processor-intervention groups outperformed both farmer-level and non-intervention groups in all three Market Revitalization categories with the largest differences realized in Production and Sales and Quality of Production. The main reason cited for this was investments in new processing capacity, which fueled production and sales by the entire sample group. The processing investments made during the post-conflict period of 2001-2004 required time to yield results as dairies worked to secure new markets for their products and to expand raw milk supply linkages. At the same time, the comparative farmer-level assistance provided by Reka Mleka and CHF was not delivered until the second half of the post-conflict period, making 2005-2007 a more indicative period for comparing intervention results.

INDICATOR PERFORMANCE

During the transitional period of 2005-2007, processor-intervention sample groups ranked highest in three out of six market performance indicators with the most significant performance recorded in the Production and Sales category, which included raw milk supply, herd size, dairy processing capacity, supply of finished dairy products, and end-market sales. The results of the three indicators related to Market Linkage Strengthening were less positive, actually indicating greater impact on the farmer-intervention group. However, the team noted in the farmer-intervention group that the average was affected by the high scores achieved by the ethnic minority

sample groups in Presevo Valley. When these scores are disaggregated from the averages, the processor-intervention group scores are highest in six out of seven indicator criteria.

ETHNIC MAJORITY AND MINORITY AREAS

The data tells a more conclusive story in ethnic Serbian majority regions, where the dairy processor-intervention group scored highest in all three Market Revitalization indicators for both the post-conflict and transitional development periods, and in two out of three Market Linkage Strengthening indicators for the transitional development period. The processor-intervention group performed similarly in the ethnic minority regions, outperforming the farmer-intervention group in all three Market Revitalization indicators during the transitional development period and in two of three Market Linkage Strengthening indicators.

MARKET DEMAND FOR RAW MILK HAD GREATER PULL-EFFECT THAN THE PUSH-EFFECT OF FARMER INVESTMENTS

According to dairy farmers surveyed in the processor-intervention sample groups, investments at the processor level did in fact have the downstream benefit originally intended by the strategy. Dairy farmers felt more confident in investing in dairy cattle and milk production as a result of the increased market demand for raw milk resulting from these investments. On the other hand, farmers in the farmer-intervention sample groups cited donor interventions as the major factor that resulted in increased milk production. The higher Market Revitalization indicator results achieved by dairy farmers in processor-intervention groups leads to the conclusion that increased demand for raw milk had a greater influence on farmers than donor interventions.

VALUE CHAIN SAMPLE GROUPS RECEIVING DONOR ASSISTANCE RECEIVE MORE EMBEDDED SERVICES

Farmers in both processor-intervention and farmer-intervention sample groups receive a much higher number of embedded services than farmers in the non-intervention groups, indicating stronger levels of farmer support from dairies in sample groups receiving donor assistance. Groups that received donor assistance, or whose farmers received donor assistance, were more comfortable investing personal resources in their supply network.

VALUE CHAIN SAMPLE GROUPS IN ETHNIC MINORITY REGIONS HAVE STRONGER MARKET LINKAGES DESPITE GEOGRAPHICALLY LIMITED ACCESS TO MARKETS

The case study found that ethnic minority groups as a whole have much stronger market linkages than homogenous communities in ethnic majority regions, despite having more geographically limited access to markets. This likely is due at least in part to the fact that value chain sample groups in ethnic minority regions are smaller and geographically closer than those in majority regions, which allows more frequent and closer communication between actors. Additionally, these communities have an inherent solidarity based on common ethnicity, acute poverty and civil rights that creates strong business relationships and higher levels of trust and cooperation amongst value chain actors. In addition, ethnic minorities accessed fewer markets outside their geographic regions.

MARKET REVITALIZATION INDICATORS

To assess overall impact on market revitalization during the post-conflict and transitional development periods in the selected regions, Mercy Corps examined three criteria: i) Production and Sales, ii) Production Quality, and iii) Product Demand.

PRODUCTION AND SALES

MILK PRODUCTION

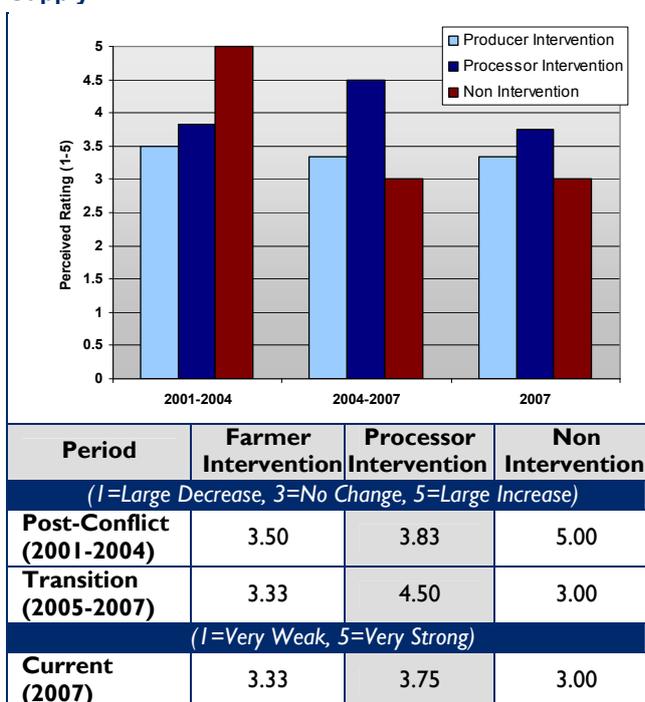
The majority of dairies in the farmer and processor intervention groups indicated that the raw milk supply increased throughout the post-conflict (2001-2004) and transitional development periods (2005-2007). The non-intervention group actually recorded the largest increase in milk collection during the post-conflict period due to one dairy (and the only one reporting this data) significantly expanding its facilities in 2004. From 2005-2007, the processor-intervention group recorded the greatest change in milk collection as well as the highest satisfaction with quantity of milk supplies in 2007.

The primary reason cited by processor-intervention dairies for the surge in milk production was the ability of large commercial farmers to influence (and convince) small farmers to expand their production. Dairy processors in the farmer-intervention group in the ethnic majority region around Nis noted a general decrease in milk production due to aging rural households and increased competition from other dairies for raw milk supplies. In the ethnic minority region of Presevo Valley, however, farmer-intervention sample groups noted increased interest in dairy farming by young farmers influenced by international donor assistance in cattle donations and technical training.

The increases in raw milk supply were due to increased herd sizes, which more than doubled over the six-year period from 2001 to 2007 for both the farmer- and processor-intervention groups. Farmers in the processor-intervention group recorded the largest herd increase during this time, followed closely by the farmer-intervention group farmers. (Four of eleven processor-intervention farmers interviewed received Mercy Corps and/or Reka Mleka assistance in 2005-2007.) As previously mentioned, the highest increases were achieved during the transitional period of 2005-2007, after the delivery of post-conflict assistance. Subsequent increases in milk production are attributed mainly to the fact that dairy processor and farmer level assistance delivered during the post conflict period of 2001-2004 took several years to yield results. Dairy processors needed time to expand their markets and supply networks, while dairy farmers required time to realize results of new farming techniques and pregnant heifers.

The research found that farmers in the processor- and farmer-intervention sample groups cited different reasons for increases in herd size: those in the farmer-intervention groups revealed that donor interventions encouraged them to expand production while those in the processor-intervention groups said the stable market

Figure 8: Dairies' Perceived Changes in Raw Milk Supply



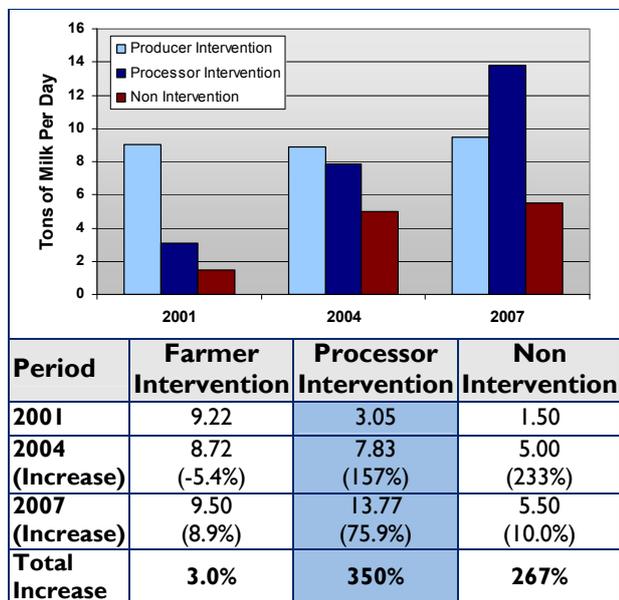
Average Herd Size (Number of Cows)			
Period	Farmer Intervention	Processor Intervention	Non Intervention
2001	4.27	5.56	4.75
2004 (Increase)	5.40 (26%)	5.90 (6%)	5.5 (16%)
2007 (Increase)	9.09 (68%)	12.60 (114%)	7.5 (36%)
Overall Increase 2001-2007	113%	127%	58%

For value chains in both intervention methodologies, herd sizes more than doubled over the six-year, post-conflict and transitional periods, compared with 58% growth in groups with no donor intervention. It should be noted that the herd size increases, expressed as a percentage, are high. This is due partly to the situation of the typical Serbian farmer who may have increased his herd by 2-3 cows, thus doubling its size.

for raw milk was the major reason they increased their herd size. Most of the dairies in the processor-intervention group said the stable markets were a result of donor investments in processing equipment. This demonstrates the positive spillover effect that processor-level interventions can have on a value chain.

DAIRY PROCESSING

Figure 9: Average Working Capacity of Dairies



Not surprisingly the increase in dairy working capacity in the processor-intervention groups was significantly higher than that in the farmer- and non-intervention groups from 2001-2007 (see Figure 9). The processor-intervention group recorded a 351 percent increase during the post-conflict and transition periods compared to 267 percent and 3 percent increases for the non-intervention and farmer-intervention groups, respectively.

The strong results of the dairy processor-intervention group are due partly to the very strong growth of one dairy in Toplica that expanded production from 8 to 50 tons/day from 2001-2007. Three other dairies recorded processing increases from 50-100 percent, while the final 2 dairies in the sample group recorded little or no growth during the 6-year period.

The majority of dairies in the processor-intervention group stated that international donor assistance, which triggered larger personal investments, was the main factor for the increases in capacity. With an average matching contribution of 84 percent, CRDA investments in dairy processors leveraged personal funds resulting in total investments ranging from \$50,000 to nearly \$200,000. This can be taken as a demonstration that international intervention, which is perceived by the local beneficiaries as an act of trust in their futures, often acts as the crucial stabilizing factor they need to attract private capital in a trust-shattered, post-conflict environment.

The relatively small increase in working capacity among farmer-intervention groups is attributed to a number of factors, including limited market growth, lack of quality milk and organizational restructuring. The three dairies in the ethnic minority region of Presevo Valley were limited by the region's small farmers and the increasingly competitive markets in Kosovo. All of the dairies in Presevo sold their products locally or to retail and non-retail end-market buyers in Kosovo and were oriented towards finding new markets in Kosovo, despite increasing competition. Administrative and customs regulations were not seen as barriers to trade, except for the very small dairies with a processing capacity of less than a ton/day, although it was noted that there is increased insecurity over the threat of the unresolved status of Kosovo and the potential tightening of cross-boundary trade. It is evident that investments in processing equipment were not the key to continued growth in these small ethnic markets. What they needed was more technical assistance in penetrating the Kosovo and non-Albanian markets. The farmer-intervention group in the ethnic Serbian region around Nis was most affected by the large Kostic dairy decreasing its working capacity by eight tons from 2001-2007 due mainly to the lack of quality raw milk and increased competition. While the largest dairy in Nis increased its daily collection, the owner confirmed the poor quality of milk in the region.

The non-intervention group's inconsistent data was impacted by one dairy expanding to a new facility in 2004, which increased production and selling then the old facility in 2005, which in turn significantly decreased processing amounts. The second dairy interviewed was established in 2004 and has achieved steady growth by focusing solely on the cheese market.

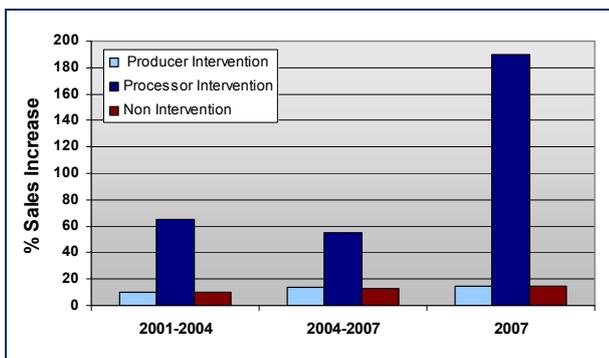
END MARKET BUYERS

The survey team asked end-market buyers how the supply of dairy products had changed throughout the post-conflict and transitional development periods. Increases were seen in all three intervention groups with the highest observed in the farmer-intervention and non-intervention groups. The highest satisfaction in the supply of finished dairy products was seen in the processor-intervention group, which rated the supply as *very strong* in both the ethnic minority Sandzak region and the ethnic majority regions. The majority of end-market buyers cited the increased number of dairies as the major factor leading to higher available quantities of dairy products. End-market buyers in the ethnic majority regions were more satisfied with the assortment of dairy products, while buyers in Preseovo and Sandzak felt only the most basic dairy products were available in sufficient quantity. The supply level of dairy products for end markets is a strong indicator of the revitalization of dairy value chains in southern Serbia.

End-Market Buyers' Perceived Changes in Dairy Products Supply (1=Large Decrease, 3=No Change, 5=Large Increase)			
Period	Farmer Intervention	Dairy Intervention	Non Intervention
2001-2004	3.66	3.5	4.00
2004-2007	4.00	3.67	4.50
2007	4.34	5.00	4.5

The case study team also surveyed end-market buyers

Figure 10: End-Market Sales (Percentage Change)



Period	Farmer Intervention	Processor Intervention	Non Intervention
2001-2004	10%	65%	10%
2005-2007	14%	55%	13%
2001-2007	15%	190%	15%

While end-market buyer sales in processor-intervention groups were much higher than those in farmer-intervention and non-intervention groups, these results can be attributed only to external factors and not to the interventions themselves. Note that reported sales increases are approximations provided during interviews and not actual figures. Furthermore, some of the end-market buyers interviewed, including those in the ethnic minority areas, hesitated about revealing sales information.

on their increases in sales throughout the project. During the post-conflict period, processor-intervention groups recorded higher sales increases (65 percent) than the farmer-intervention (10 percent) and non-intervention (10 percent) groups, as well as during the transitional development period (55 percent compared with 14 percent and 13 percent respectively). Note that increased sales are estimations and not exact and allow a margin of error in the data. End-market buyers in the ethnic minority regions and two others in majority regions did not report their net incomes.

End-market buyers did not cite increases in dairy processing capacity as a major reason for increased profits as all of those interviewed had very diversified retail and/or wholesale operations. Instead, companies across all three groups mentioned the introduction of the value-added tax (VAT) system in 2004 as significantly helping to decrease black market sales and illegal competitors. End-market buyers also cited expanding retail outlets and higher prices for their improved sales performance. While increases in end-market buyer sales were not linked to donor interventions, the data shows the impact that the improved enabling environment had on the dairy subsector.

PRODUCT QUALITY

Most of the dairies indicated that raw milk quality during the post-conflict period was in general low and improved somewhat due mostly to new milking equipment (milking machines and lacto-freezers). While a general increase in quality was noted, dairies mentioned that raw milk quality decreased whenever farmers were unhappy with prices. Low prices most often translated into diluted and unsanitary milk supplies as farmers actively voiced their discontent. Additionally, the current high demand for raw milk provided little incentive to care for milk hygiene as farmers could sell their supplies to milk-hungry dairies. Only the dairies in the ethnic region of Presevo Valley evaluated milk quality high, mostly due to favorable environmental conditions and the high fat content of milk, however, Presevo Valley dairies still mentioned a need for education on milk hygiene and better milking equipment.

Quality of Raw Milk Supply Dairies' Perceived Changes			
Period	Farmer Intervention	Processor Intervention	Non Intervention
<i>(1=Large Decrease, 3=No Change, 5=Large Increase)</i>			
Post-Conflict (2001-2004)	3.33	3.50	3.00
Transition (2004-2007)	3.33	4.00	3.50
Current (2007)	3.50	3.40	3.00
Quality of Dairy Products			
Post-Conflict 2001-2004	3.60	4.00	4.00
Transition 2004-2007	4.00	4.17	3.50

PROCESSING QUALITY

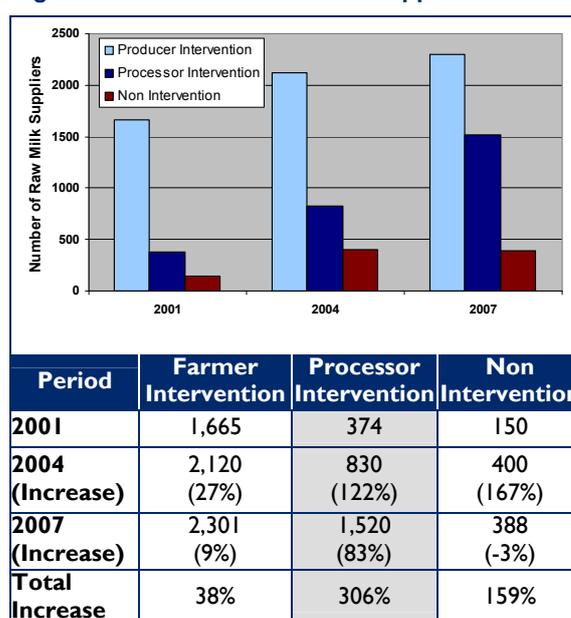
While all groups noted increasing product quality from 2001-2007, processor-intervention groups recorded slightly higher quality increases than the other groups. Dairy owners cited several reasons for this, ranging from a higher level of technical experience, new technologies and equipment, better packaging and improved quality control over raw milk supplies. Donor investments at the processor level all were noted to have had positive quality enhancing effects through investments in equipment such as homogenizers, pasteurizers packaging machines and laboratory equipment.

PRODUCT DEMAND

RAW MILK DEMAND

Farmers noted minor increases in demand for raw milk, with results varying only slightly in the three groups. All noted small increases during the post-conflict period and slightly higher increases during the transition period. Current demand is perceived as very strong and all 26 farmers surveyed rated demand at the highest level possible. Most dairy farmers stated that they could sell at least 50 percent more raw milk over current levels if they had sufficient herd size. Even though a part of high demand for raw milk was influenced by the severe draught that hit Serbia in 2007, all farmers felt confident that dairy farming could provide a stable source of income for their families over the long term. The key reasons cited for the increased demand varied among the three groups. Farmers in the processor-intervention groups cited the increase in the number of private dairies and expansion into new markets while farmers in the farmer- and non-intervention groups stated that raw milk demand was influenced by low supply. Current demand for raw milk has undoubtedly also been influenced by stricter quality regulations that require all food processors in Serbia to be HACCP-certified

Figure 11: Number of Raw Milk Suppliers



by January 2009. This has forced dairies to upgrade their facilities and insist that farmers provide them with higher quality milk. And, in addition to highlighting the need for modern irrigation, the severe summer drought of 2007 also contributed to demand for raw milk by reducing fodder production and the supply of raw milk.⁹

DAIRY PROCESSOR DEMAND FOR DAIRY PRODUCTS

Demand for dairy products logically showed a similar pattern across the three groups, with slight increases from 2001-2004 and more significant increases from 2005-2007. Current demand satisfaction is high. No single factor contributed to these positive results and reasons for them range from greater product assortment, increases in consumers' disposable incomes, and entry into new markets. Some may, however, be attributed to CRDA investments, such as two of the dairies that received CRDA investments specifically to develop new cheese products.

MARKET LINKAGE STRENGTHENING INDICATORS

To assess the impact on market linkages of the two development strategies, Mercy Corps studied the following indicators: i) Increased Market Linkages, ii) Business Relationships, and iii) Embedded Services. The research team also investigated the extent to which linkages were established between different ethnic groups in minority regions of Serbia and in former conflict regions in Bosnia and Croatia.

INCREASED MARKET LINKAGES

DAIRY FARMERS

The number of farmers linked to dairy sample groups increased throughout the post-conflict and transition periods for all the intervention groups. However, the number of suppliers and supply networks in the processor-intervention group experienced the greatest growth, with a three-fold increase (see Figure 11 above), which also closely mirrored increases in processing. In addition, herd sizes increased as suppliers capitalized on the greater demand.

Demand for Raw Milk & Dairy Products (1 = Large Decrease, 3 = No Change, 5 = Large Increase)			
Period	Producer Intervention	Processor Intervention	Non Intervention
Demand for Raw Milk			
Post-Conflict 2001-2004	3.50	3.33	3.75
Transition 2004-2007	3.82	4.30	4.25
Current 2007	5.00	5.00	5.00
Processors' Demand for Dairy Products			
Post-Conflict 2001-2004	3.82	3.83	4.00
Transition 2004-2007	4.04	4.00	4.50
Current 2007	4.81	4.67	5.00
End Market Buyers Demand			
Post-Conflict 2001-2004	3.50	3.50	3.50
Transition 2004-2007	3.67	3.83	3.50
Current 2007	4.67	5.00	4.50
Demand for raw milk and dairy products increased throughout the project, as indicated by all value chain actors in all sample groups surveyed. Current demand is rated as very strong among everyone surveyed. End-market buyers indicated that retail demand for basic dairy products such as milk and yogurt remained relatively constant, while that for higher-value market products, such as cheese and spreads has grown. Supermarket chains have been a positive development for retailers, but have come at the expense of small shops.			

⁹Advisor to Minister of Agriculture, Zaharia Trnavcevic, estimates that only 3 percent of Serbian arable land is properly irrigated.

DAIRIES

The number of dairies supplying end market buyers increased for the processor- and farmer-intervention groups with the majority of the increase during the transitional period. Only the processor-intervention group recorded an increase from 2001-2004 due mainly to the entry of several dairies in Sandzak. The decrease of end markets from 2001-2004 was mostly due to instability of new dairies in the marketplace and stagnating consumer demand. As previous data show, consumer demand and production were stronger during the transitional development period of 2004-2007. Results also showed increased market penetration of larger dairies as end market buyers highlighted increased industry competition

Number of Dairies Supplying End Markets			
Period	Farmer Intervention	Processor Intervention	Non Intervention
2001	4.00	2.00	12.50
2004	4.00	2.50	9.50
(Increase)	(0%)	(25%)	(-24%)
2007	7.33	4.25	9.00
(Increase)	(83%)	(70%)	(-5%)
Total Increase	83%	113%	-28%

SAMPLE GROUP RELATIONSHIPS

FARMERS' RELATIONSHIPS WITH DAIRIES

In all three groups, farmers' business relationships with dairies improved significantly and currently rate them as *very good*. However, during the post-conflict period of 2001-2004 farmers indicated that corruption and delinquent payments, remnants of the old socialist system and conflict environment, were a cause of the dissatisfaction that resulted from a lack of support (such as embedded services) by dairies. While interviews with small dairies revealed a high number of embedded services, farmer discontent could result from larger dairies such as Imlek not providing more assistance to their supply network.

Farmers' Business Relationship with Dairies (1=Very Poor, 5=Excellent)			
Period	Farmer Intervention	Processor Intervention	Non Intervention
Before Conflict <1991	3.75	3.00	2.67
During Conflict 1991-2001	4.10	2.83	2.80
Post-Conflict 2001-2004	4.33	4.50	4.25
Present 2007	4.25	4.63	4.25

Farmers in the ethnic minority regions reported much stronger relationships than their counterparts in ethnic majority regions. The major reason cited for this was that farmers cooperated only with local private dairies as opposed to some of the larger state-owned dairies which had much larger supplier networks and were severely impacted by cuts in government subsidies during the 1990s. Farmers in ethnic majority regions reported switching dairies several times during and after the conflict before finding a stable buyer. Also, the previously mentioned strong ethnic bonds in the Presevo Valley and Sandzak regions led to increased levels of solidarity and trust within their sample groups.

Despite having stronger business relationships, ethnic minority groups recorded less market access outside their immediate geographic regions. Dairies in Presevo were not able to access larger markets such as Nis or Belgrade and the majority of sales in Sandzak occurred within southern Serbia.

DAIRIES' RELATIONSHIPS WITH FARMERS

Dairies cited a minor overall improvement in cooperation with farmers from 2001-2007. The processor-intervention group was least satisfied with farmers, pointing to bad milk quality and quantity and a lack of loyalty among farmers who constantly chased higher prices. This is somewhat surprising as processor-intervention dairies scored highest with respect to raw milk quality and quantity.

The farmer-intervention groups in the ethnic minority region of Presevo Valley consistently scored highest with respect to satisfaction with farmers, due mainly to the small size of supplier networks (180 farmers compared to an average of 2,100 farmers in the farmer-intervention group in Nis). This small number of producers is one of the major reasons for the positive relationships within the sample groups as dairies have almost daily contact with farmers. In Presevo, some dairy owners personally collect milk from farmers, while larger dairies in other regions use collection services. Another factor influencing relations between farmers and dairies is intermittent milk production—many farmers do not sell milk to dairies on a regular basis, but sell instead to individual households at higher prices. While somewhat disruptive to milk supplies and dairy processors, the intermittent relationship provides fewer opportunities for conflict.¹⁰

Dairies' Business Relationships (1 = Very Poor, 5 = Excellent)			
Sample group Actors	Farmer Intervention	Processor Intervention	Non Intervention
2001			
Farmers	3.83	2.00	4.00
End Markets	4.00	2.40	4.00
Suppliers	4.00	2.80	1.00
2004			
Farmers	3.17	2.40	3.50
End Markets	4.17	2.80	2.50
Suppliers	4.20	2.80	3.50
2007			
Farmers	3.50	3.50	3.50
End Markets	4.17	3.33	2.50
Suppliers	4.60	4.00	4.50

DAIRY PROCESSOR RELATIONSHIP WITH END-MARKET BUYERS

Little improvement in cooperation between dairy processors and end-market buyers was observed during the project. Dissatisfaction with payment was the most contentious issue with dairies outlining inconsistent payments and fraudulent buyers. The processor-intervention group recorded higher satisfaction, due in part to strong relationships in the ethnic minority region of Presevo Valley. A majority of Presevo dairies market their products in Kosovo and frequently receive payments in hard currency (euros) and cash, thereby avoiding the legalities of bank transfers and sales taxes that other dairies encounter.

DAIRY PROCESSOR RELATIONSHIP WITH INPUT SUPPLIERS

The research team also investigated the relationships dairies have with suppliers of packaging materials, machinery and other inputs. Responses among all groups and ethnic regions were generally consistent with a steady increase in satisfaction, which was highest in the Presevo Valley, where dairies rated their business relationships *very good to excellent*.

EMBEDDED SERVICES

EMBEDDED SERVICES FOR DAIRY FARMERS

The final market linkage indicator the team examined was the number of embedded services provided by dairies to farmers. Both the processor- and farmer-intervention groups cited a larger number of services than the non-intervention groups. Of eight embedded services cited, both groups offered at least six, while non-intervention groups provided only three. Some of the processor-intervention groups helped farmers form dairy associations, partly because of their involvement in association development activities through CRDA in 2005-2007. The dairies in the Presevo Valley sometimes offer advance payments and hard currency transactions, while both intervention groups in ethnic majority regions serve as guarantors for bank loans for their farmers.

¹⁰In the past, most households bought milk daily from individual farmers. As awareness of quality standards has risen, consumers have shifted to buying industrially-processed milk and dairy products in retail outlets, particularly in the more economically developed regions of Serbia, where individual door-to-door sales of raw milk are now practically non-existent. In Presevo Valley, however, there is still a thriving market for individual sales of raw milk, especially in autumn, when households are busy preserving perishable goods for winter.

EMBEDDED SERVICES FOR DAIRIES

No dairies reported receiving embedded services from their wholesale or retail buyers in the form of advance payments, bank loan guarantees or bulk purchases of dairy products.

Embedded Services for Dairy Farmers 2007			
Embedded Service	Farmer Intervention	Processor Intervention	Non Intervention
Advanced Payments	X		
Payment in Hard Currency	X		
Additional Premiums	X	X	X
Livestock Purchase	X	X	
Bulk Supply Purchases	X	X	X
Procurement of Milking Equipment	X	X	X
Bank Loan Guarantees	X	X	
Association Formation		X	

MARKET LINKAGES IN ETHNIC MINORITY AND CONFLICT REGIONS

The team surveyed dairies to determine if they marketed their products in conflict-affected or ethnic minority regions from 2001-2007. Several dairies in Presevo Valley and Sandzak market products in Kosovo and Sandzak. In Presevo Valley, in fact, the majority of sales from all three dairies surveyed are in Kosovo, while two of three dairies in Sandzak also have significant markets in Kosovo.

Several dairies in the ethnic majority regions stated that all of their business with Kosovo ceased after the NATO bombing in 1999. Dairies in Sandzak cited several challenges with conducting business in Kosovo, including expensive and untimely inspection and export procedures and payment problems. Most dairies in the

Market Linkages in Conflict Affected & Ethnic Minority Regions (Number of Dairies)				
Region	Farmer Intervention	Processor Intervention	Non Intervention	Total
Kosovo	3	2	1	6
Sandzak	0	3	1	4
Bosnia	0	1	0	1
Croatia	0	0	0	0
Total	3	6	2	11

ethnic Albanian region of Presevo Valley indicated few issues apart from increased competition from other dairies. The largest dairy interviewed has just begun exporting products to Bosnia. The majority of small dairies did not indicate ethnic tensions as a reason for not approaching such markets, but rather a lack of product diversification, capacity and quality standards.

EVALUATION AND DIRECTION OF POST-CONFLICT ASSISTANCE

DIRECTION OF POST-CONFLICT ASSISTANCE

The survey team asked participants in all three groups where assistance should have been directed following disruptions in the value chain after the conflict. Results were similar in all three groups, roughly evenly split between producer- and processor-level support. The farmer-intervention group favored slightly more assistance to dairy farmers, although the sample groups in the ethnic minority region of Presevo Valley favored a more even split. The trend was similar for the processor-intervention group where sample groups in the ethnic minority region of Sandzak suggested a more balanced approach to assistance, while ethnic majority sample groups leaned toward processor-level assistance.

Direction of Post Conflict Assistance		
Farmer Intervention	Processor Intervention	Non Intervention
Producer: 62%	Producer: 48%	Producer: 48%
Processor: 38%	Processor: 52%	Processor: 52%

TYPE OF POST-CONFLICT ASSISTANCE

Survey participants ranked the type of assistance most necessary during the post-conflict period of 2001-2004. While responses were similar between the farmer- and processor-intervention groups, they differed between the ethnic minority and majority groups. Groups in the under-developed region of Sandzak ranked infrastructure as the most needed assistance, while in the more developed area of Nis, groups ranked equipment, training and livestock as the top three assistance needs. The higher value placed on training is likely attributed to satisfaction with Reka Mleka’s approach of farmer group mentoring through training and technical assistance. All participants agreed that the severity of the conflict did not warrant any basic humanitarian assistance.

Type of Post Conflict Assistance (Ranked in Order of Importance)		
Farmer Intervention	Processor Intervention	Non Intervention
1. Equipment	1. Equipment	1. Livestock
2. Livestock	2. Livestock	2. Equipment
3. Infrastructure	3. Infrastructure	3. Training
4. Training	4. Training	4. Infrastructure
5. Humanitarian	5. Humanitarian	5. Humanitarian

Post-conflict needs varied among different villages surveyed, as actors in some groups cited inadequate economic infrastructure while others indicated a need for livestock or new equipment. The differing responses to the type of post-conflict assistance highlighted the fact that donor interventions lacked the flexibility to respond to the range of different post-conflict requirements of targeted sample groups.

V. CONCLUSIONS AND RECOMMENDATIONS

Thesis Statement: During a period of post-war reconstruction, targeted support to capable, value-adding processors leads to a) faster market revitalization, and b) stronger market linkages in strategic subsectors than does directing economic assistance towards raw material producers or letting market mechanisms revitalize on their own.

Conclusion: The case study results were mixed in proving the hypothesis that investments at the processor level would lead to faster market revitalization and stronger market linkages than at the farmer-level or non-interventions in the post-conflict environment of Serbia.

During the immediate post-conflict period of 2001-2004, there were only minor differences in dairy sector performance between the two intervention methodologies and the non-intervention group. However, during the transitional period of 2005-2007, groups that received interventions at the processor level out-performed their counterparts in five out of six performance indicators (11 of 17 criteria), the strongest differences being in the Production and Sales indicator criteria: raw milk supply, size of farmer supply networks, number of finished dairy products, dairy processing capacity and end-market sales.

The meat sector research was inconclusive due to an absence of livestock who received donor assistance and were linked to value chains; the majority of CRDA beneficiaries receiving livestock donations had no formal linkages to meat processors.

RESEARCH QUESTION 1: HOW CAN THE VALUE CHAIN APPROACH CONTRIBUTE TO THE REBUILDING OF MARKETS IN POST-CONFLICT SITUATIONS?

PROCESSOR INTERVENTIONS HAD GREATER IMPACT IN THE DAIRY SUBSECTOR

Serbia's large state enterprises declined into a state of financial ruin after the collapse of Yugoslavia in the 1990s, leaving a large deficit in processing capacity. Small private dairies financed through private savings earned abroad or the sale of personal assets quickly sprang up to fill the gap in dairy production. While raw milk production declined significantly during the 1990s, donor investments at the processor-level were seen to have had greater impact on productivity throughout whole value chains than those at the farmer-level. In the processor-intervention groups, qualitative evidence showed that farmers realized the largest increases in herd size and milk production; dairies had the greatest increase in capacity; and end-market buyers were most satisfied with the supply of dairy products and achieved the highest increases in sales.

Recommendation: Stimulate processing capacity to revitalize indigenous industries. Donor investments at the processor level can be effective in stimulating value chain productivity for conflict-affected subsectors. Being central to the value chain, processors serve as vital actors to stimulate markets for raw materials as well as boost production of value-added goods. Processor interventions are particularly effective in indigenous industries that have proven market demand and production experience. As the critical link in the value chain, processors often have the strongest intellectual and private capital that can be leveraged to integrate larger numbers of actors in the chain and consequently increase local production and import substitution. While important, interventions at the processor level should not be relied upon as the sole value chain revitalization strategy. A sound value chain approach must look at all actors in the chain to determine where investments have the greatest impact.

DONOR INTERVENTIONS LACKED A COMPREHENSIVE VALUE CHAIN APPROACH

During Serbia's post-conflict period (2001-2004) donor-funded projects generally applied uniform approaches that delivered prescribed investments to only one intervention point in targeted subsectors. More effort should have been spent on assessing value chain performance and developing more comprehensive approaches to revitalizing entire value chains. In southern Serbia there was arguably too much support delivered to too many processors leading to an underutilization of capacity, either because processors lacked markets or sufficient raw milk supply. Some enterprise owners felt that larger investments in a smaller number of dairies would have been a more effective use of resources. At the same time, the majority of farmer-level interventions delivered a limited offering of assistance to farmers, while offering minimal or no effort to developing end markets.

Recommendation: Develop and deliver comprehensive, dynamic value chain approaches. Post-conflict economic relief and development efforts should employ comprehensive and dynamic value chain approaches that consider multiple types of interventions along the entire value chain. Prescribed, uniform approaches at one level in the chain risk creating market distortions due to unbalanced growth. Value chains should be constantly monitored and evaluated to balance production levels with market demands. Inefficiencies in value chain growth should be managed through a portfolio of technical assistance and capital investments.

PRODUCTIVITY GAINS WERE STRONGER WHEN FARMERS WERE LINKED TO VALUE CHAINS

In the meat subsector, the research found that farmers linked to value chains performed significantly better in terms of increasing herd sizes and incomes from livestock activities than farmers who were not selling to a processor.

Recommendation: Value chain interventions should focus on commercially oriented beneficiaries. Much of the donor economic revitalization assistance, particularly through CRDA, was delivered based on need rather than commercial potential, thereby contributing little to the economic revitalization of targeted subsectors. While CRDA aimed to provide a mix of social safety nets and development support, economic assistance that was not directed to specific, vulnerable populations (displaced persons and minority groups) should have been directed to commercially oriented beneficiaries linked to value chain sample groups.

DAIRY VALUE CHAIN SAMPLE GROUPS THAT RECEIVED DONOR ASSISTANCE HAD HIGHER LEVELS OF EMBEDDED SERVICES

Dairy processors in intervention groups that received investment at either the processor or farmer levels offered a higher proportion of embedded services to farmers than sample groups that did not receive donor assistance. These dairies did not, however, indicate that donor interventions were the main reason they invested more resources in their farmers, stating that it was a natural, market-driven phenomenon. In the meat subsector, sample group processors receiving donor interventions did not necessarily offer more embedded services to farmers than those in non-intervention sample groups.

Recommendation: Promote embedded services in value chain programming. Processors in Serbia demonstrated that they were willing and interested in providing embedded services to farmers. Interventions should have capitalized on this by promoting and emphasizing such win-win relationships, in addition to, or perhaps in lieu of, the heavy emphasis on matching and/or community contribution. Had donors integrated more incentive schemes to promote support within a sample group, they may have been better able to encourage and leverage embedded services.

IMPLEMENTERS WERE SUCCESSFUL IN TARGETING INDIGENOUS SUBSECTORS FOR POST-CONFLICT ASSISTANCE

Nearly all post-conflict economic revitalization activities targeted indigenous subsectors where there was a long tradition and significant local capacity, the one exception being the CRDA donations of sheep to nascent

livestock breeders. Only after providing support to key value chains and subsectors did implementers look to diversify into other high-value economic activities.

Recommendation: Develop indigenous subsectors rather than introducing new initiatives. Selecting subsectors that utilize local knowledge and target existing market demand is a sounder strategy than introducing new activities with unknown market demand and lower levels of physical and human resources and capacity.

RESEARCH QUESTION 2: HOW CAN END MARKETS BEST BE USED TO DRIVE MARKET UPGRADING AND VALUE CHAIN STRENGTHENING IN POST-CONFLICT SITUATIONS?

MARKET DEMAND FOR FARMERS' PRODUCTION HAD A STRONGER INFLUENCE ON FARMERS THAN DONOR INVESTMENTS

In the dairy subsector farmers who supplied dairies that received donor investments in processing equipment increased their herd sizes and levels of raw milk significantly more than did farmers receiving donor assistance directly through donated livestock, equipment and/or training. Increased market opportunities were a better motivating force than assets or improved technical skills.

In the meat subsector, livestock breeders supplying processors who received donor investments had more sustainable herd sizes and higher levels of income those who received livestock donations. Farmers in the processor-intervention groups had greater market opportunities, were more committed to improving their operations, and were generally more optimistic about the future.

Recommendation: Ensure the presence of market opportunities for farmers before or while investing at the production level. Creating stable and profitable markets for agricultural production is a prerequisite for investing at the farmer level. Without strong market incentives, farmers will not adopt new technologies or optimally utilize capital investments.

THERE WAS A LOW LEVEL OF TRUST BETWEEN BUYERS AND SELLERS DURING THE POST-CONFLICT PERIOD

Many farmers and processors cited high levels of corruption and fraud during the post-conflict period, which resulted in mistrust between chain actors.

Recommendation: Facilitate relationships between farmers, dairies and end markets. Donors and implementers should engage in building and improving relationships among value chain actors through activities such as organizing regular business roundtables that focus on subsector and sample group revitalization issues, disseminating subsector directories and contact information and facilitating forward contracts between buyers and sellers.

THE VALUE-ADDED TAX (VAT) SYSTEM HELPED INCREASE SALES FOR WHOLESALERS AND OTHER END-MARKET BUYERS

Wholesalers and other-end market buyers stated that introduction of the VAT tax system in 2004, a critical policy reform, helped improve the enabling environment and resulted in sales increases by limiting or eliminating illicit competition.

Recommendation: Enabling environment is important for post-conflict value chain revitalization. While significant post-conflict assistance is delivered at the farm and firm levels to improve production and expand markets, reforming the policy environment is just as crucial for revitalizing value chains. Policy reforms that improve the business enabling environment should be undertaken in parallel with farm- and firm-level assistance.

RESEARCH QUESTION 3: HOW CAN STRATEGIC SUBSIDIES, INCLUDING GRANTS AND/OR VOUCHERS, BE USED TO LAY THE GROUNDWORK FOR AN EVENTUAL TRANSITION TO A MARKET-DRIVEN ECONOMY?

INTERVENTIONS WERE SUCCESSFUL IN LEVERAGING MATCHING CONTRIBUTIONS

Despite the difficult post-conflict economic period, donor investments were able to improve performance within sample groups by leveraging large amounts of private capital to match those investments. Dairy and meat processors matched the Mercy Corps CRDA investments at 84 percent and 54 percent, respectively, significantly surpassing the minimum 25 percent requirement. In contrast, Reka Mleka farmer groups leveraged 20 percent of project funds through beneficiary, community and/or municipality.

Recommendation: Leverage capital investments through matching contributions. Client savings and disposable income capacities should not be discounted in the post-conflict recovery period. Economic actors who were forced to leave their countries or those with relatives living abroad were able to establish savings through remittances or activities in other countries, which provided significant leverage opportunities.

CLOSER MONITORING OF SAMPLE GROUP PERFORMANCE WAS NECESSARY TO IDENTIFY HIGH-IMPACT INVESTMENT OPPORTUNITIES

Donors and implementers in Serbia should have monitored value chain actors more closely in order to meet evolving needs in the chain. The currently underutilized dairy processing capacity in southern Serbia is due partly to a shortage of quality raw milk resulting from small herd sizes, low-producing genetic stock, and bad feeding practices. The majority of milk producers said they could sell at least 50 percent more raw milk to processors if they could reach sufficient production levels. Had increased attention focused on monitoring such inconsistencies, capital investments could have resulted in more balanced and productive sample groups.

Recommendation: Monitor value chain performance to identify investment opportunities. Careful monitoring of the entire value chain is necessary to determine where investments can have the greatest impact. This can and should be done through a well-designed, planned and implemented M&E strategy.

FARMER-LEVEL INVESTMENTS WERE DISTRIBUTED TO TOO FEW BENEFICIARIES

Support to dairy farmers through donor-funded projects could have achieved greater impact by delivering assistance to more beneficiaries. For example, Reka Mleka and CHF worked with a very small number of milk producers during the post-conflict period: Reka Mleka supported only 10 dairy farmer associations of roughly 10 members each from 2003-2005; while CHF delivered 1 cow to each of 65 households in 2003. If the organizations had opened their programs to more dairy farmers during the first two years, greater impact in milk production could probably have been achieved more rapidly.

MANY DONOR-FUNDED FARMER-LEVEL INVESTMENTS WERE TOO SMALL

Larger investments at the farmer level could have boosted dairy farming in the Presevo Valley and other regions to higher production levels. Investments of one cow per household and one or two pieces of machinery to small associations arguably result in relatively small impact to a sample group.

Recommendation: Donor investments should balance breadth with depth. Donors should assess and determine the adequate levels of investments to spread a critical mass of benefits to the widest number of beneficiaries. Just as small investments in too many beneficiaries may show limited benefits to a subsector, so too can large investments in only a few beneficiaries—balance is critical.

POST-CONFLICT ASSISTANCE TAKES TIME TO SHOW RESULTS, SOMETIMES SEVERAL YEARS AFTER THE INVESTMENTS

Full benefits from investments in the dairy sector were generally realized in 2005-2007, two years after the post-conflict period. This was due in part to the fact that some assistance was delivered in the middle of the post-conflict period and to the several years it took the multiplier effects—increased production capacity, technical knowledge and market opportunities—to become fully realized and effective. Donors should have realistic expectations about the pace of subsector revitalization in post-conflict environments, where social and financial capital are often low.

THERE OFTEN WAS A LACK OF COORDINATION AMONG DONORS AND IMPLEMENTING PARTNERS

The five CRDA partners and the USAID competitiveness project, Serbian Enterprise Development Project (SEDP), did a weak job in coordinating efforts. While regular economic working group meetings were held, few joint initiatives arose from the meetings. SEDP should have provided more guidance to CRDA partners to ensure that the significant financial resources that CRDA represented were targeting the appropriate intervention levels and types of equipment and training. In addition, CRDA partners should have communicated better with respect to their economic revitalization and development strategies.

ANNEXES

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ANNEX I: CRDA BENEFICIARY PROFILES

1a: Zornic Dairy

1b: Ljin Dairy

1c: Eko Hrana Milk Collection

1d: Demonstration Farmer Jovan Stojadinovic

ZORNIC DAIRY

Dairy Processing - Tutin

Murat Zornić, Owner, Tel: +381-(0)63-483-990

COMPANY OVERVIEW

In 1997, Zornić began working as a dairy processor in the municipality of Tutin in the Sandžak Region in Southern Serbia. Zornić produces yogurt, pasteurized milk, kajmak, and peppers in cream. The company collects milk from 182 farmers in the high-mountain Pester Plateau region. Zornić's primary markets are western Serbia, Montenegro, and Kosovo. It currently collects and processes 4,000 liters of milk per day.



CRDA PROJECT

In 2002 Mercy Corps invested \$ 74,868.78 in a pasteurizer, boiler, and packer for Zornić as well as technical assistance in marketing and business and financial planning. As part of the project, Zornić Dairy provided additional processing equipment and constructed a building to house the new equipment. The project was successful in phasing out the company's previous system of packing milk in plastic bottles and polyethylene bags.

WORK IN KOSOVO

Zornić delivers and sells its products to approximately 30 retail food stores in Vucitrn, Kosovska Mitrovica, and Pec. Sales in Kosovo account for 30 percent of total sales, but they do not buy any raw materials from farmers in Kosovo. Zornić has encountered road blockades organized by Albanian milk processors who refuse to let milk enter from outside the country. The company also faces administrative barriers to trade in the form of lengthy customs and sanitary inspections and poor road infrastructure.

LJIN DAIRY

Dairy Processing – Novi Pazar

Mr. Golub Pendic, Owner, Tel: +381-(0)63-844-3462

COMPANY OVERVIEW

Ljin was founded in 1990 in Saronje, Novi Pazar and produces pasteurized milk, yogurt, sour milk with cream, pepper in cream, whole fat cheese, fat-free cheese, cream and whey.

Ljin's products are found in Novi Pazar, Leposavic, Kosovska Mitrovica, Raska, Zvecan, Tourist Center Kopaonik, and Tourist Center Golija. To a smaller extent its products are sold in Belgrade, Podgorica, and Novi Sad. Ljin collects milk from 520 farmers (approximately 7 tons per day) in the high-mountain Golija region known in Serbia for its ecologically pure products.



CRDA PROJECT

In 2002 Mercy Corps assisted the Ljin Dairy purchase two packing machines (capacity 600 lit/hour) in order to phase out the previous system of milk packing in plastic bottles and polyethylene bags. In addition Ljin procured packing supplies for the new equipment. Ljin's community payback for the project was a donation of \$1,500 worth of milk products to a local kindergarten.

WORK IN KOSOVO

Ljin sells its products in the northern part of Kosovo, specifically in Lesak, Leposavic, Kosovska Mitrovica, Zvecan and Zubin Potok. It delivers and sells products directly to a network of 50 retail food stores. Sales to Kosovo make up 20 percent of Ljin's total sales. The company does not purchase any raw materials from Kosovo. Ljin faces troubles in Kosovo with time-consuming customs and sanitary inspections as well as poor road infrastructure.

EKO HRANA MILK COLLECTION

“Dairies don’t want to send vehicles for collecting milk to this remote area... The landscape is too hilly and there are no regular roads. But I took a risk, and with Mercy Corps’ help, I achieved something that no one thought could be done,” Stevan Zajić, the youngest CRDA/Mercy Corps entrepreneur.

Since 2003, Stevan Zajić’s daily routine has been to visit the most remote villages and farmers in the Kuršumljia municipality. Realizing that the majority of the population in these villages depend on milk and fodder production, he decided to start his own business to fill this need. “Before 2003, there was no milk collection service for farmers leaving them with no steady income”, said Stevan.

The following year, USAID/Mercy Corps and Eko-hrana invested more than \$36,000 in new cultivating equipment, allowing cooperating farmers to receive cultivating assistance and expand their production. Larger areas of improved land cultivation for animal fodder have enhanced livestock production quantity and quality. Stevan now has two trucks and reaches every single milk producer in his mountainous area.

His perseverance is paying off, as he is now able to sell milk to Doma dairy from Kuršumljia, a local dairy that has increased its production capacity thanks to Mercy Corps financial assistance. Eko-hrana also created a sustainable partnership with Eko-mleko, a local dairy processor, by purchasing feed mill to produce a wide spectrum of fodder products to farmers. In this manner, USAID/Mercy Corps has developed a strong network linking three local processing companies, Eko hrana, Eko mleko and Doma, and providing sustainable livelihoods for local farmers in the Kuršumljia region. Farmers now believe their living standard has improved through the sale of milk and production of fodder, allowing them to reinvest in their farms and the economic vitality in the region.



Stevan Zajić, the owner of Eko-hrana, supplies remote farmers with fodder and milk collection services helping to secure strong markets between livestock farmers and dairy processors.

DEMONSTRATION FARMER: JOVAN STOJADINOVIC

Milk Production, Collection and Feed Mixing - Blace

Tel: +381 63 88-37-941

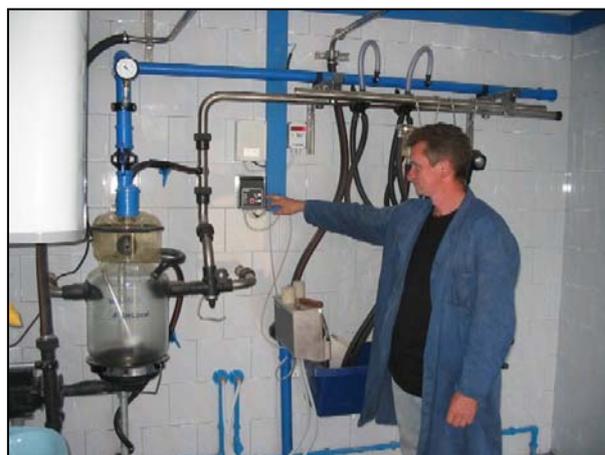
In June of 2006 Mercy Corps and its institutional partners (DeLaval, FAO, Reka Mleka and the Agricultural School in Prokuplje) officially opened the Stojadinovic dairy demonstration farms. By June 2007, more than 1000 farmers had visited Mr Stojadinovic's farm to learn about best farm management practices, new production technologies, and proper hygiene and quality control techniques required by international HACCP and EUREPGAP standards.

Mr Stojadinovic's farm houses over 20 cows in an open-style barn that was newly refurbished in 2005/2006 after he was selected through an open competition to be one of Mercy Corps four dairy demonstration farmers. After a matching contribution of over \$40,000 in farm refurbishments, Mr. Stojadinovic received a mechanized vacuum milking system that pumps milk directly from a lacto-freezer (cooling tank).

As a leader in his village Mr. Stojadinovic collects over one ton of milk from more than 50 households in Blace municipality and delivers it every morning to the dairy. Mr. Stojadinovic also offers feed mixing services on his farm and helps educate farmers on the proper feed rations to maximize their milk yields.

Mr. Stojadinovic's farm is located in southeastern Serbia in the municipality of Blace. He manages the farm with his wife and two young children.

As president of the Grgure Farmers' Association Mr. Stojadinovic currently is active in helping to join Grgure and four other farmers' associations into a union so they can take advantage of bulk purchasing, milk collection and better prices from the local dairy.



ANNEX 2: FIELD RESEARCH SURVEYS

2a: Dairy Farmer Surveys

2b: Dairy Processor Survey

2c: Dairy End Market Survey

ANNEX 2A: PROCESSOR-LEVEL VALUE CHAIN INTERVENTION GROUP - DAIRY PRODUCER ORGANIZATION SURVEY

INTRODUCTION

Mercy Corps has been contracted by USAID to participate in a world-wide research study on economic development in post-conflict countries. The purpose of the study is to strengthen USAID's programs in post-conflict environments to accelerate the transition from conflict to sustainable growth. Serbia is an appropriate case study country that has transitioned from the violent break-up of Yugoslavia and international sanctions to a stable economy capable of competing in international markets. Mercy Corps is collecting information from dairy farmers, dairy processors and retail stores to investigate the impact that conflicts in Serbia and the region had on the dairy sector and how, if at all, USAID's post-conflict programs, such as the CRDA project, helped businesses and farmers like you get through these conflicts. While we intend to share our findings with our donor, USAID, other partners and colleagues in the dairy industry, we will ensure your anonymity in the final report. I will be asking you several questions and my colleague Bojan Trebjesanin will be taking notes. There are approximately 28 questions which should take roughly an hour to answer, so we ask you to respond with short and concise answers. We appreciate your participation in this survey and your willingness to help Mercy Corps and USAID improve their economic assistance programs in conflict-affected countries.

INTERVIEW INFO

Date and Time of the Interview: _____

Interviewee's name: _____

Member of a PO? (Yes = 1, No = 0): _____

Producer Organization Name: _____

Type of Producer (cooperative =1, association =2, individual = 3): _____

Municipality: _____

International donor beneficiary (0=Ne, 1 = Da): If yes, which partner:

**USAID/Reka Mleka
Beneficiary, Yes = 1, No = 0**

**If yes, which partner? 0 = MC,
1=CHF, 2=Reka Mleka. 3 =
ACDI/VOCA, 4 = Other donors
(list the names)**

2001 – 2004 (Specify the year) 200__

200 – Present (Specify the year) 200__

Code for the interviewee: _____

PRODUCER BACKGROUND INFORMATION

1. Date producer organization was founded or when the producer started dairy farming:

2. How much of your household net income came from dairy farming before/during/after the conflict? What activities account for the rest of your household income?

	Before Conflict (>1992)	During Conflict (1992-2001)	2001	2004	Present
% of Household Income From Dairy Farming					
% of Household Income From Ag Production (list your primary product):	Sector: Percent:	Sector: Percent:	Sector: Percent:	Sector: Percent:	Sector: Percent:
% of Household Income from Other Activities					

3. If applicable, how many members does your PO have? _____

1990	During conflict	2001	2004	Current members

4. If applicable, are any members of your producer organization refugees from former Yugoslav Republics or IDPs from Kosovo? If so how many and from which country or region? How many of these people were involved in dairy farming before moving to southern Serbia?

# of Refugees/IDPs	How Many From Each Country/Region?	# Involved in Dairy Farming Before Moving?

5. If applicable, are all your members from the same ethnic group and area? _____ If No, Please explain? If No, did you ever have problems or disputes relating to ethnicity or religious differences?

Are all your members from the same ethnic group and area? (Y=1, N=0)	If No, explain:	If No, describe ethnicity-related problems/disputes:

6. If applicable, can someone from a different ethnic group or area join your producer organization if they want? (Y/N) _____ If no, please explain.

7. If applicable, does your PO coordinate or facilitate the sale of raw milk for its members? _____ If yes, how? What services does your producer organization provide for its members?

Does the PO coordinate the	If Yes, How?	List other services the PO provides to its members?

raw milk sale? Y/N		

8. Did you or the members of your producer organization receive any additional support from the dairies that you sell milk to before/during/after the conflict? (Extension services, assistance purchasing machinery or cattle, credit, lacto-freezers.)

Before Conflict (>1992)	During Conflict (92-2001)	2001	2004	2007

CONFLICT OPERATING ENVIRONMENT

NOTE TO SURVEY PARTICIPANTS: “The period of conflict is intended to include the wars during the break-up of Yugoslavia during the 1990s, the NATO bombing in 1999 and international sanctions from 1992 – 2001”

9. As best you can, please describe how the dairy industry in your region (including sales) was impacted by the conflict. a) buyers of raw milk b) size of farms/production (state or private) c) agricultural inputs d) extension services e) enabling environment (government management) f) access to credit and g) anything else important to add.

Also did the conflicts of the 1990s and/or 1999 pose problems for the functioning of your PO? If yes, list the most important effects of the conflicts on your PO—a lack of trust in cooperatives and associations, lack of commitment to agricultural production, mistrust of government, or other.

10. What were the two worst and two best years for the agriculture sector during the conflict?

11. What is the name and location of the dairies to who you or your producer organization sold raw milk to before/during/after the conflict? And evaluate the business relationship you have with the dairy (1= Very Poor, 5= Excellent). If less than 5, please explain?

Name of Dairy	Municipality	Evaluation of Dairy (1-5)	Explain Rating and the change in buyers
Before Conflict			
During Conflict			

Post-Conflict			
Present			

12. Did the conflict affect the general business relations among the actors in the agricultural sector during the 1990s? If yes, please explain the impact of the conflict.

Please rate the impact using the following scale: 1= large improvement, 2= small improvement, 3 = no change, 4= worsened slightly and 5= worsened greatly

Rating: 1-5	Explain the impact of the conflict on business relations:

13. Were you actively involved (militarily or through other means) in any of the conflicts associated with the break-up of Yugoslavia in the 1990s? If so, for how long? How did this impact your dairy farming business? For POs: On average, what % of your association members were actively involved in the military activities and for how long? Describe the impact.

Personal Involvement in Conflict (Y/N?)	Length of Time	If applicable, impact on Dairy Farm Business

POST-CONFLICT OPERATING ENVIRONMENT

14. Please explain how the demand for raw milk changed in the last six years.

Rate the impact of the change between periods using the following scale: 1= large improvement, 2= small improvement, 3 = no change, 4= worsened slightly and 5= worsened greatly.

Also rate the current demand for raw milk using the following scale: 1=very weak, 2=weak, 3=satisfactory, 4=strong, 5=very strong

Demand for raw milk

2001 or ToE	Change to 2004	2004 (Describe the situation and explain the reasons for change)	Change to 2007	2007 (Describe the situation and explain the reasons for change)	Current Rating
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15. Please explain how your production (or your PO's production) for raw milk changed in the last six years and rate the impact of the change between periods using the following scale: 1= large improvement, 2= small improvement, 3 = no change, 4= worsened slightly and 5= worsened greatly? **Are you able to meet the quantity demands of your buyers?**

Production of raw milk

2001 or ToE	Change to 2004	2004 (Describe the situation and explain the reasons for change)	Change to 2007	2007 (Describe the situation and explain the reasons for change)
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16. Please explain how the quality for raw milk changed in the last six years and rate the impact of the change between periods using the following scale: 1= large improvement, 2= small improvement, 3 = no change, 4= worsened slightly and 5= worsened greatly? **Are you able to meet the specific quality requirements of your buyers?**

Quality of raw milk

2001 or ToE	Change to 2004	2004 (Describe the situation and explain the reasons for change)	Change to 2007	2007 (Describe the situation and explain the reasons for change)
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17. Please rate the quality of the extension services (ag/vet stations, pharmacies) over the past six years.

Rate the impact of the change between periods using the following scale: 1= large improvement, 2= small improvement, 3 = no change, 4= worsened slightly and 5= worsened greatly.

Also rate the current quality of extension services using the following scale: 1=very weak, 2=weak, 3=satisfactory, 4=strong, 5=very strong

Quality of extension services

2001 or ToE	Change to	2004 (Describe the	Change	2007 (Describe the situation and	Current
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2004	situation and explain the reasons for change)	to 2007	explain the reasons for change)	Rating
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18. Rate the quality of the economic infrastructure 2001, 2004 and 2007 (roads, energy supplies, water)
Rate the impact of the change between periods using the following scale: 1= large improvement, 2= small improvement, 3 = no change, 4= worsened slightly and 5= worsened greatly.

Also rate the current quality of economic infrastructure in your region using the following scale: 1=very weak, 2=weak, 3=satisfactory, 4=strong, 5=very strong

Quality of economic infrastructure

2001 or ToE	Change to 2004	2004 (Describe the situation and explain the reasons for change)	Change to 2007	2007 (Describe the situation and explain the reasons for change)	Current Rating
Roads:		Roads:		Roads:	
Water:		Water:		Water:	
Electricity:		Electricity:		Electricity:	

19. Describe the impact of the government policies and support towards the recovery of the agriculture sector in 2001, 2004 and 2007. List any specific legislation/regulations/subsidies that impacted the dairy industry either positively or negatively.

Describe the impact of the change between periods using the following scale: 1= large improvement, 2= small improvement, 3 = no change, 4= worsened slightly and 5= worsened greatly.

Please also rate the current government’s management of the agriculture sector using the following scale: 1=very weak, 2=weak, 3=satisfactory, 4=strong, 5=very strong

Government’s Management of Agriculture Sector

2001 or ToE	Change to 2004	2004 (Describe the situation and explain the reasons for change)	Change to 2007	2007 (Describe the situation and explain the reasons for change)	Current Rating
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20. What are the biggest challenges your or the members of your producer organization face?

21. What do you think about the future for small dairy farmers?

22. Do you think your company will remain in the market in the next five years considering the evolving market conditions? How would you ensure this?

ASSESSMENT OF POST-CONFLICT ASSISTANCE

23. Please rank in order of importance the following types of post-conflict assistance that would have been most valuable to your region during the period 2001-2004: a) infrastructure, b) equipment grants to the dairy sector, c) training and education, d) basic food and medicine supplies, e) livestock donations, f) other (please specify).

Rank Most Important Types of Post-Conflict Assistance
a)
b)
c)
d)
e)
f)

24. During the USAID/CRDA project from 2001-2007 Mercy Corps made a concerted effort to channel its post-conflict support in agriculture only to dairies and other processors after the conflict ended in 2001. Support to producer organizations came only after small dairies had been strengthened and the market for raw milk increased – from 2005-2007. Given the economic hardships that Serbia faced in 2001, what are your thoughts on this strategy in terms of rapidly revitalizing important agricultural industries such as the dairy sector?

25. Please evaluate the type of USAID/Reka-Mleka post-conflict assistance you received from Mercy Corps based on the following criteria?

a) Did the USAID/Reka-Mleka post-conflict assistance you received from Mercy Corps make a significant impact on your business or living conditions? Explain.

b) Type of Support (equipment grants vs. training vs. trade promotion):

c) Timing (did support come at the right time for your business):

26. Were you required to provide any community payback contribution such as donations of your products or other services? (Y/N) _____ If yes, approximately how much and what % of the total CRDA amount was community payback _____? If not, did you still provide these services?

27. For non-grant recipients: Did you provide any assistance to your community (i.e., milk or food donations) during the post-conflict/transition period between 2001 and 2004? If yes, what type and what was the value of the assistance? (need a table here)

Grant recipient (Y/N) (N=0, Y=1)	Required to provide community payback contribution? (N=0, Y=1)	Type of Post-Conflict Community Assistance 2001-2004	Amount (RSD or EUR value)
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28. Other Comments:

ANNEX 2B: PROCESSOR-LEVEL VALUE CHAIN GROUP - DAIRY PROCESSOR SURVEY

INTRODUCTION

Mercy Corps has been contracted by USAID to participate in a world-wide research study on economic development of industries in post-conflict countries. The purpose of the study is to strengthen USAID's programs in post-conflict environments in order to accelerate the transition from conflict to sustainable growth. Serbia is an appropriate case-study country having transitioned from the violent break-up of Yugoslavia and international sanctions to a stable economy capable of competing in international markets. Currently, we are collecting information from stakeholders in the dairy industry: dairy farmers, dairy processors and retail stores to investigate the impact that conflicts in Serbia and the region had on the dairy sector and how, if at all, USAID's post-conflict programs, such as the CRDA project, helped businesses and farmers such as you through these conflicts. While we intend to share our findings with our donor, USAID, other partners and colleagues in the dairy industry, we will ensure your anonymity in the final report. I will be asking you several questions and my colleague Bojan Trebjesanin will be taking notes. There are approximately 33 questions which should take roughly an hour to answer, so we ask you to respond with short and concise answers. We appreciate your participation in this survey and your willingness to help Mercy Corps and USAID improve their economic assistance programs for conflict-affected countries.

INTERVIEW INFO

Date and Time of the Interview: _____

Name of the Dairy: _____

Interviewee's name: _____

Interviewee's position in the Dairy: _____

Municipality: _____

International donor beneficiary (0=Ne, 1 = Da): If yes, which partner:

**USAID/Other Beneficiary,
Yes = 1, No = 0**

**If yes, which partner? 0 = MC,
1=CHF, 3 = ACDI/VOCA, 4 =
Other donors (list the names)**

2001 – 2004 (Specify the year) 200__

200 – Present (Specify the year) 200__

Code for the interviewee: _____

DAIRY PROCESSOR BACKGROUND INFORMATION

1. Date Company Was Founded: _____

2. Type of Primary Products (as a percent of sales)

	1990	During Conflict	2001	2004	2007
Milk					
Yogurt					
Cheese					
Pavlaka					
Kackavalj					
Other (specify)	-	-	-	-	-
	-	-	-	-	-

3. HACCP/ISO Certified? (Y/N) _____ If so when did you become certified? _____ If not, are you planning to do so and when? _____

4. How many employees did your company have in the following periods 1990, Conflict, 2001, 2004 and now in 2007?

Employees in 1990	Employees during conflict	Employees in 2001	Employees in 2004	Current Employees
Full Time _____	Full Time _____	Full Time _____	Full Time _____	Full Time _____
Part Time _____	Part Time _____	Part Time _____	Part Time _____	Part Time _____

5. Are any employees of your company refugees from former Yugoslav Republics or IDPs from Kosovo? If so, how many and from which country or region? Has this impacted your business in anyway? (difficult employee relations, extra employee demands, cheaper labor, etc.)

# of Refugees/IDP Employees	How Many From Each Country/Region?	Impact on Business

6. How many farmers did you buy raw milk from in the following periods?

During Conflict	2001	2004	2007
-----------------	------	------	------

7. Approximately what percentage of your dairy farmers were members of a producer organization during the following periods?

During Conflict

2001

2004

2007

8. How would you evaluate the business relationship (level of trust or quality of business relationship) you have with your **dairy farmers, other suppliers** (packaging materials, machinery) and **retailers** (1= Very Poor, 5= Excellent) If less than 5, please explain?

	Level of Trust Rating			Explain
	2001 or DoE	2004	2007	
Dairy farmers				
Other Suppliers				
Retailers				

9. Do you provide any support services (supplies, credit, technical assistance, forming producer groups, etc) to your dairy farmers? (Y/N) If yes please describe these services and the effects they have had on your suppliers.

10. Do you receive special sales terms from your buyers (advanced payments/delivery terms) (Y/N) If yes please describe these services and the effects they have had on your business.

CONFLICT OPERATING ENVIRONMENT

NOTE TO SURVEY PARTICIPANTS: “The period of conflict is intended to include the wars during the break-up of Yugoslavia during the 1990s, the NATO bombing in 1999 and international sanctions from 1992 – 2001”

11. As best you can, please describe how the dairy industry in your region (including sales) was impacted by the conflict covering the following topics? a) impact on small & large dairies b) market demand c) production d) quality/quantity of raw milk supplies e) economic infrastructure f) other supplies g) enabling environment (government policies) h) availability of credit i) anything else important to add.

12. What were the two worst and two best years for the agriculture sector during the conflict period?

13. Did the conflict affect the general business relations among the actors in the agricultural sector during the 1990s? If yes, please explain the impact of the conflict.

Were there customers/suppliers/individuals that you did/did not do business with during or after the conflict because of opposing views or political beliefs regarding the conflict? (Y/N) If so please explain.

Please rate the impact using the following scale: 1= large improvement, 2= small improvement, 3 = no change, 4= worsened slightly and 5= worsened greatly

Impact Rating: 1-5	Explain the impact of the conflict on Business Relationships and Market Linkages:

14. Were you actively involved (militarily or through other means) in any of the conflicts associated with the break-up of Yugoslavia in the 1990s? If so for how long? And how did this impact your dairy business?

Personal Involvement in Conflict (Y/N?)	Length of Time	Impact on Dairy

15. Did you take up other income-generating activities (apart from dairy processing) to supplement your income during the conflict period? If so what were these activities?

POST-CONFLICT OPERATING ENVIRONMENT

16. Indicate the size of the market for dairy products in 2001, 2004 and 2007. Could you sell everything you were producing and how strong was the demand for dairy products? Was there higher market demand for specific products?

Please evaluate the impact of the change between time periods using the following scale: 1= large improvement, 2= small improvement, 3 = no change, 4= worsened slightly and 5= worsened greatly.

Please rate the current market for dairy products using the following scale (1=very weak, 2=weak, 3=satisfactory, 4=strong, 5=very strong)

Market Size					
2001 or DoE	Change to 2004	2004 (Describe the situation and explain the reasons for change)	Change to 2007	2007 (Describe the situation and explain the reasons for change)	Current Rating

17. Please describe the price for dairy products in 2001, 2004 and 2007.

Describe the impact of the change between periods using the following scale: 1= large improvement, 2= small improvement, 3 = no change, 4= worsened slightly and 5= worsened greatly.

Please also rate the current prices for dairy products using the following scale 1=very weak, 2=weak, 3=satisfactory, 4=strong, 5=very strong.

Price of Dairy Products					
2001 or ToE	Change to 2004	2004 (Describe the situation and explain the reasons for change)	Change to 2007	2007 (Describe the situation and explain the reasons for change)	Current Rating

18. How much milk were you processing in 2001, 2004 and 2007? **Were you able to meet the quantity demands of your buyers during this period?**

Describe the impact of the change between periods using the following scale: 1= large improvement, 2= small improvement, 3 = no change, 4= worsened slightly and 5= worsened greatly.

Milk Processing

2001 or ToE	Change to 2004	2004 (Describe the situation and explain the reasons for change)	Change to 2007	2007 (Describe the situation and explain the reasons for change)	Current Rating
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19. Describe the quality of your products in 2001, 2004 and 2007. **Are you able to meet the specific quality demands from your buyers?**

Describe the impact of the change between periods using the following scale: 1= large improvement, 2= small improvement, 3 = no change, 4= worsened slightly and 5= worsened greatly

Quality of Dairy Products

2001 or ToE	Change to 2004	2004 (Describe the situation and explain the reasons for change)	Change to 2007	2007 (Describe the situation and explain the reasons for change)
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20. Describe quality and quantity of raw milk you were collecting from the farmers in 2001, 2004 and 2007.

Describe the impact of the change between periods using the following scale: 1= large improvement, 2= small improvement, 3 = no change, 4= worsened slightly and 5= worsened greatly.

Rate the current quality/quantity of the raw milk that you collect from your farmers using the following scale (1=very weak, 2=weak, 3=satisfactory, 4=strong, 5=very strong)

Quality/Quantity of Raw Milk

2001	Change to 2004	2004 (Describe the situation and explain the reasons for change)	Change to 2007	2007 (Describe the situation and explain the reasons for change)
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Quantity	Quality	Qnt	Qli	Quantity	Quality	Qnt	Qli	Quantity	Quality
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Current Quality Rating of Raw Milk (1-5)

Current Quantity Rating of Raw Milk (1-5)

21. Describe the quality of the economic infrastructure in 2001, 2004 and 2007 (roads, energy supplies, water).

Rate the impact of the change between periods using the following scale: 1= large improvement, 2= small improvement, 3 = no change, 4= worsened slightly and 5= worsened greatly.

Please also rate the current economic infrastructure using the following scale: 1=very weak, 2=weak, 3=satisfactory, 4=strong, 5=very strong.

Quality of Economic Infrastructure

2001 or ToE	Change to 2004	2004 (Describe the situation and explain the reasons for change)	Change to 2007	2007 (Describe the situation and explain the reasons for change)	Current Rating
Roads:		Roads:		Roads:	
Water:		Water:		Water:	
Electricity:		Electricity:		Electricity:	

22. Describe the impact of government policies and support towards the recovery of the agriculture sector in 2001, 2004 and 2007. List any specific legislation/regulations/subsidies that impacted the dairy industry either positively or negatively.

Describe the impact of the change between periods using the following scale: 1= large improvement, 2= small improvement, 3 = no change, 4= worsened slightly and 5= worsened greatly.

Please also rate the current government’s management of the agriculture sector using the following scale: 1=very weak, 2=weak, 3=satisfactory, 4=strong, 5=very strong

Government’s Management of Agriculture Sector

2001 or ToE	Change to 2004	2004 (Describe the situation and explain the reasons for change)	Change to 2007	2007 (Describe the situation and explain the reasons for change)	Current Rating
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23. Indicate if and how your company’s net income changed after the period of conflict by using the following scale (1= large increase, 2= small increase, 3 = no change, 4= small decrease, 5= large decrease). Please indicate your perceived reasons for any changes in net income.

Net Income in 2001	Net Income in 2004	Net Income in 2007	Explain the change

24. Did you ever attempt to do business in Sandzak, Kosovo, BiH or Croatia? If so, describe your experience: when, the outcomes, types of relationships, etc.

25. What are the biggest challenges your dairy faces today?

26. What do you think about the future for small dairy processors?

27. Do you see your company remaining in the dairy industry over the next five years, taking into consideration evolving market conditions? How will you ensure this?

ASSESSMENT OF POST-CONFLICT ASSISTANCE

28. Please rank in order of importance the following types of post-conflict assistance that would have been most valuable to your region during the period 2001-2004: a) infrastructure, b) equipment grants to the dairy sector, c) livestock donations to producers, d) training and education to dairy sector value chain, 3) basic food and medicine supplies, f) other (please specify).

Rank	Most Important Type of Post-Conflict Assistance
a)	
b)	
c)	
d)	
e)	
f)	

29. During the USAID/CRDA project from 2001-2007 Mercy Corps made a concerted effort to channel its post-conflict support in agriculture only to dairies and other processors after the conflict ended in 2001. Support to producer organizations came only after small dairies had been strengthened and the market for raw milk increased – from 2005-2007. Given the economic hardships that Serbia faced in 2001, what are your thoughts on this strategy in terms of rapidly revitalizing important agricultural industries such as the dairy sector?

30. Please evaluate the type of USAID/CRDA post-conflict assistance you received from Mercy Corps based on the following criteria?

a) Did the USAID/CRDA post-conflict assistance you received from Mercy Corps make a significant impact on your business? Explain.

b) Type of Support (equipment grants vs. training vs. trade promotion):

c) Timing (did support come at the right time for your business):

31. Were you required to provide any community payback contribution such as donations of your products or other services? (Y/N) _____ If yes, approximately how much and what % of the total donation amount was community payback _____? If not, did you still provide these services?

32. For non-grant recipients: Did you provide any assistance to your community (i.e., milk or food donations) during the post-conflict/transition in the period between 2001 and 2004? If yes, what type and what was the value of the assistance? (need a table here)

Grant recipient Y/N: (N=0, Y=1)	Required to provide community payback contribution? (N=0, Y=1)	Type of Post-Conflict Community Assistance 2001-2004	Amount (RSD or EUR value)
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33. Other Comments:

ANNEX 2C: PROCESSOR-LEVEL VALUE CHAIN GROUP – END-MARKET BUYER SURVEY

INTRODUCTION

Mercy Corps has been contracted by USAID to participate in a world-wide research study on economic development of industries in post-conflict countries. The purpose of the study is to strengthen USAID's programs in post-conflict environments in order to accelerate the transition from conflict to sustainable growth. Serbia is an appropriate case-study country having transitioned from the violent break-up of Yugoslavia and international sanctions to a stable economy capable of competing in international markets. Currently, we are collecting information from stakeholders in the dairy industry: dairy farmers, dairy processors and retail stores to investigate the impact that conflicts in Serbia and the region had on the dairy sector and how, if at all, USAID's post-conflict programs, such as the CRDA project, helped businesses and farmers such as you through these conflicts. While we intend to share our findings with our donor, USAID, other partners and colleagues in the dairy industry, we will ensure your anonymity in the final report. I will be asking you several questions and my colleague Bojan Trebjesanin will be taking notes. There are approximately 21 questions which should take roughly an hour to answer, so we ask you to respond with short and concise answers. We appreciate your participation in this survey and your willingness to help Mercy Corps and USAID improve its economic assistance programs for conflict-affected countries.

INTERVIEW INFO

Date and Time of the Interview: _____

Name of the End Market Buyer: _____

Interviewee's name: _____

Interviewee's position in the Company: _____

Municipality: _____

Code for the interviewee: _____

DAIRY PROCESSOR BACKGROUND INFORMATION

1. Date/Year Company Was Founded: _____

2. Type of Dairy Products Sold as a percent of sales of total dairy products (milk, cheese, yogurt etc).

Alternatively, please rank the highest sold dairy products.

Type of Primary Dairy Products Sold (percent)

	Before Conflict	During Conflict	After Conflict
Milk			
Yogurt			
Cheese			

8. Did the conflict affect the general business relations among actors in the agricultural sector during the 1990s? Please rate the impact using the following scale: 1= large improvement, 2= small improvement, 3 = no change, 4= worsened slightly and 5= worsened greatly

If yes, please explain the impact of the conflict.

Impact Rating: 1-5	Explain the impact of the conflict on agri-business relationships:

9. What were the three main problems you faced in operating your business during the conflict period?

10. Were you actively involved (militarily or through other means) in any of the conflicts associated with the break-up of Yugoslavia in the 1990s? If so, for how long? And how did this impact your food retail business?

Personal Involvement in Conflict (Y/N?)	Length of Time	Impact on Dairy

11. Indicate if and how your companies net income changed during the period of conflict by using the following scale (1= large increase, 2= small increase, 3 = no change, 4= small decrease, 5= large decrease). Please indicate your perceived reasons for any changes in net income?

Net Income in 2001	Net Income in 2004	Net Income in 2007	Explain the change

12. Did you take up other income generating activities apart from food retail to supplement your income during the conflict period? If so what were these activities?

POST-CONFLICT OPERATING ENVIRONMENT

13. Did consumer demand for dairy products change over the past six years and for which products was this change most visible.

Please rate the impact of the change between periods using the following scale: 1= large improvement, 2= small improvement, 3 = no change, 4= worsened slightly and 5= worsened greatly Please also rate the current demand for dairy products using the following scale: 1=very weak, 2=weak, 3=satisfactory, 4=strong, 5=very strong

Demand for Dairy Products

2001 or ToE	Change to 2004	2004 (Describe the situation and explain the reasons for change)	Change to 2007	2007 (Describe the situation and explain the reasons for change)	Current Rating
-------------	----------------	--	----------------	--	----------------

14. Did the supply of dairy products change over the past six years and rate the impact of the change between periods using the following scale: 1= large improvement, 2= small improvement, 3 = no change, 4= worsened slightly and 5= worsened greatly.

Please also rate the current supply (diversification of products and availability) of dairy products using the following scale (1=very weak, 2=weak, 3=satisfactory, 4=strong, 5=very strong)

Supply of Dairy Products

2001 or ToE	Change to 2004	2004 (Describe the situation and explain the reasons for change)	Change to 2007	2007 (Describe the situation and explain the reasons for change)	Current Rating
-------------	----------------	--	----------------	--	----------------

15. Please describe the price for dairy products in 2001, 2004 and 2007 and rate the impact of the change between periods using the following scale: 1= large improvement, 2= small improvement, 3 = no change, 4= worsened slightly and 5= worsened greatly.

Please also rate the current prices for dairy products using the following scale 1=very weak, 2=weak, 3=satisfactory, 4=strong, 5=very strong

Price of Dairy Products

2001 or ToE	Change to 2004	2004 (Describe the situation and explain the reasons for change)	Change to 2007	2007 (Describe the situation and explain the reasons for change)	Current Rating
-------------	----------------	--	----------------	--	----------------

16. Describe the impact of government policies and support towards the recovery of the agriculture sector in 2001, 2004 and 2007. List any specific legislation/regulations/subsidies that impacted the dairy industry either positively or negatively.

Describe the impact of the change between periods using the following scale: 1= large improvement, 2= small improvement, 3 = no change, 4= worsened slightly and 5= worsened greatly.

Please also rate the current government’s management of the agriculture sector using the following scale: 1=very weak, 2=weak, 3=satisfactory, 4=strong, 5=very strong

Government’s Management of Agriculture Sector					
2001 or ToE	Change to 2004	2004 (Describe the situation and explain the reasons for change)	Change to 2007	2007 (Describe the situation and explain the reasons for change)	Current Rating

17. What are the biggest challenges your food retail store faces today?

18. What do you think about the future for the dairy industry?

ASSESSMENT OF POST-CONFLICT ASSISTANCE

19. Please rank in order of importance the following types of post-conflict assistance that would have been most valuable to your region during the period 2001-2004: a) infrastructure, b) equipment grants to the dairy sector, c) training and education d) basic food and medicine supplies e) livestock donations, f) other (please specify).

Rank Most Important Type of Post-Conflict Assistance
a)
b)
c)
d)
e)
f)

20. During the USAID/CRDA project from 2001-2007, Mercy Corps made a concerted effort to channel its post-conflict support in agriculture to only dairies and other processors after the conflict ended in 2001. Support to producer organizations came only after small dairies had been strengthened and the market for raw milk increased—from 2005-2007. Given the economic hardships that Serbia faced in 2001, what are your thoughts on this strategy in terms of rapidly revitalizing important agricultural industries such as the dairy subsector?

21. Other comments:

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