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Restocking in the former Yugoslavia

Post-war restocking projects in Bosnia-
Herzegovina and Kosovo

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Front page photo: ©FAO/Liana Miuccio. A kosovan farmer discusses animal health issues with a veterinarian after having received a heifer in donation as part of a project designed to restart agricultural production following civil conflict. - - FAO/World Bank Emergency Farm Reconstruction Project: OSRO/KOS/009/WBK (FAO 2000).

Summary

The break up of the former Federal Republic of Yugoslavia (1990) was followed by brutal war and ethnic cleansing. Many people fled rural areas and 50-90% of livestock were lost. When the fighting stopped in Bosnia and Herzegovina (1995) most moved back to their now ruined small-holdings. Many had no means of providing a secure livelihood, lacking livestock, agricultural machinery and alternative employment opportunities.

In response to this the Emergency Farm Reconstruction Project was initiated in Bosnia-Herzegovina (1996-97), shortly followed by the Small Farm Reconstruction Project (1997-2001). Combined the projects distributed about 17,500 sheep, a similar number of pregnant heifers, 25 bulls and over a thousand goats. These animals were distributed to over 14,000 households. These projects also distributed agricultural machinery and investigated in veterinary services and Artificial Insemination (AI) services (the latter was provided for free). The vast majority of stock were imported from Europe. Early restocking had the primary aim of improving food security, high productivity breeds were used with the aim of improving the genetic merit of the national herd.

Cattle recipients were provided with one pregnant dual purpose dairy-beef heifer each. The programme targeted people and areas most affected by the war, who had experience with livestock and the resources to look after a new cow. Restocking rapidly helped to provide a source of nutrition for many households (11 litres milk/day on average). However, impact was compromised in the first project as 85% of offspring of the high pedigree cattle were slaughtered instead of being kept for breeding. This was in part due to immediate financial needs and an inability to care for additional cattle.

Cattle mortality and abortion rates were low (4.4% and 1.1% respectively in the first project). Although they produced more milk, the imported cattle required higher levels of nutrition and care than traditional breeds. Some beneficiaries could not cope with the stock or struggled to get them back in calf. This was exacerbated by early failings in the targeting procedure, whereby, communities prioritised those most affected by the war regardless of their ability to care for the restocked animals. These issues were identified and matters improved with time.

Due in part to a lack of relevant experience, the goat component largely failed and was discontinued after the first project. Goats were expensive and experienced high mortality (30%) and abortion rates (34% at evaluation, 1997). The early sheep component was poorly monitored. On the whole, although lacking at the beginning, monitoring and evaluation was exceptional with a range of detailed and useful data collected (e.g. relating to animal health, fertility, livelihoods, beneficiary satisfaction, finances, etc...).

In 2001 a similar project was initiated in post-war Kosovo. In this project 4,399 pregnant heifers and 92 bulls, most imported from Europe by aeroplane, were provided to 4500 households. Sheep and goats were excluded in light of problems experienced in earlier projects. This time veterinary support was free, households also received animal feed and husbandry training. Mortality was again low (3.5% at evaluation 2003), milk yield was good for the breed and conditions (average 12.5 litres milk/day) but fertility had improved (74% back in calf at evaluation). Culling of progeny was much lower and two years after restocking started the project had resulted in over 9,000 restocked cattle

including births. However, some beneficiaries could not cope and the heifer was sold (10%), died (3.5%) or was slaughtered (1.8%). Stock had again been given to those most affected by war with insufficient consideration of their suitability. As pedigree stock were sold rather than slaughtered it was seen as less of a waste.

In Bosnia-Herzegovina animals were mostly given as loans to be repaid in cash. Loan repayment was a problem for many reasons, these included confusion, lack of involvement of the overseeing bank and the recipients' inexperience with credit and foreign currency. In emergency rehabilitation projects the priority is providing sustainable relief for those in need, this sometimes means providing for those less credit-worthy.

In Kosovo beneficiaries were supposed to pass on the offspring of the restocked animals to other community members. As is often the case, this rarely happened, confusion being cited as a reason.

The projects also wanted to help farmers move away from subsistence farming and generate an income from selling livestock products. However, lack of market opportunity and infrastructure was a limitation as was an inability to look after more than a few cattle. Subsequent projects have focussed on the development of market chains and dairy infrastructure necessary for commercial farming. This will bring benefits to the wider sector and not just those that keep livestock.

One of the outstanding features of these projects has been their ability to identify and react to problems on the ground and to take this into account in future activities. In terms of disease, animals in these projects possibly faced a lower burden of disease and more favourable conditions than those restocked in less developed regions with endemic tropical diseases. Regardless of these innate advantages, much of the success of these projects has been due to their implementation. Through constant monitoring and improvement restocking programmes in this region have become highly effective; the lessons learnt are relevant to other programmes regardless of their setting.

Table 1: Summary of restocking projects in post-war Bosnia and Herzegovina and Kosovo.

Date	Organisation (Source)	Programme	Country	Description	Animal health Outcomes	Comments
1996 - 1997	World Bank /IFAD/EU/Netherlands/Germany/Bosnia-Herzegovina/Qater/Saudi Fund for Development (IFAD 1997; Ablasser & Koch 1998; Heffernan & Goe 2006; Heffernan 2009)	Emergency Farm Reconstruction Project	Bosnia and Herzegovina	Provided 6,187 pregnant heifers, 5,000 sheep and 1,372 goats to approximately 9,000 recipients, cash repayment expected for most. The heifers and goats were distributed on a credit basis, while the sheep were given as a grant.	<ul style="list-style-type: none"> -Cattle: very low rates of mortality (4.4%) and abortion (1.1 %). And 11 litres/day milk, or about 2,700 litres/cow/year -After calving one third not back in calf one year later, two-thirds took on average 160 days calving to conception interval -Goats: about 17.5% were not distributed as the animals had either died (3.5%) or been rejected because they did not meet technical specifications (14%). -High mortality among nannies and kids (30%) and a high goat abortion rate (34%). -The surviving nannies produced on average only 0.6 kids each. -Pneumonia, internal parasites, Q fever were problems in goats. -Fewer problems with sheep. -Almost 95% of imported heifers produced calves, of which 85% were slaughtered and thus not available for rebuilding the herd. 	<ul style="list-style-type: none"> -Some individuals lacked experience and resources for keeping animals. -Such participants should have been excluded. -Recipients of goats have been unable or unwilling to service their debts. -Difficulties with getting the cows in-calf largely due to inadequate feeding and the harsh environmental conditions. -Imported animals were expensive.
1997 - 2001	IFAD/World Bank/UN (IFAD 2001; IFAD 1997)	Small Farm Reconstruction and Development Project	Bosnia and Herzegovina	5 267 poor farm families received 11 401 in-calf heifers and 12 343 sheep – repayments expected	<p><i>Little data provided but some important findings:</i></p> <ul style="list-style-type: none"> - Recovery of repayments was a problem. -The purchase price for each heifer included one-year of insurance. - One should ensure the existence of milk markets before dairy cows are distributed. - Farmers need advice and training in certain aspects of livestock management. - Inadequate extension and animal health services can seriously undermine the project, including ability to improve livestock breeds. - For restocking projects, where there are sufficient animals and functioning financing systems, cash loans are a better alternative than in-kind loans. Cash loans allow each farmer to choose the animals they purchase. However, technical support should be provided. -Poor quarantine facilities resulted in needless death and abortion. -Livestock transportation facilities were a problem. 	
2000-2002	FAO/World Bank/Netherlands/Sweden/Italy (The World Bank 2003; Heffernan & Goe 2006)	Emergency Farm Reconstruction Project	Kosovo	-4489 Simmental and Brown Swiss cattle imported from Austria and Germany. All pregnant heifers except 90 bulls.	<p>Phase one:</p> <ul style="list-style-type: none"> -No losses, but 8 injuries during import. -<1% losses at holding farms -2% culled <p>Overall in 2003:</p> <ul style="list-style-type: none"> -mortality 3.5% -85% in good health -6% stolen -74% back in calf -Calving interval 14.7 months -Average milk yield 12.5litres/day -95% of cows reproduced 	<ul style="list-style-type: none"> -Animals imported by air (approx. 40 flights). -10% sold, often as breed was too high maintenance -Few recipients would donate offspring to others as envisioned. -Husbandry of bulls was poor

Glossary

ACTED - L'Agence d'Aide à la Coopération Technique et au Développement

AI – Artificial Insemination

EU – European Union

FAO – Food and Agriculture Organisation

IFAD – International Fund for Agricultural Development

NATO – North Atlantic Treaty Organisation

NGO – Non-Governmental Organisation

UN - United Nations

WSPA – World Society for the Protection of Animals

Introduction

Following the break up of the former Socialist Federal Republic of Yugoslavia in 1990, the region descended into war. The main conflict took place between 1991 and 1995 and was characterised by bitter and complex clashes between different ethnic groups (IFAD 2012).

Bosnia-Herzegovina

The Dayton peace accord (1995) signalled the end of the war and established the complex structure of the modern state of Bosnia-Herzegovina. Before the war Bosnia-Herzegovina was a medium income region. During the conflict between 100,000 and 250,000 of its citizens lost their lives with the displacement of almost a half of the nation's pre-war population of 4.4 million. It is now one of the poorest countries in Europe, over half the population are either poor or vulnerable to poverty. During the war most of the rural population fled to the cities for safety, once peace had returned many returned to subsistence farm having few other options. Despite this only about half of the available arable land is farmed; reasons for this include lack of privatisation of former state land, landmines, flooding and poor irrigation. The first point highlights some of the difficulties the region has had with the transition from the communist system to a free market economy. Being a country of mountains and forests there is a lack of highly productive agricultural land; few countries in the world have less arable land per head of population (IFAD 2012).

Rural livelihoods were particularly hard-hit by the conflict. Farmers lost 50-60% of their assets and 50-90% of their livestock (losses: cattle =60%, sheep-75%, pigs-90%, poultry-68% and horses-65%) (Heffernan & Goe 2006). Buildings and infrastructure were destroyed and machinery neglected and damaged.

There are approximately 570,000 smallholder farms in Bosnia-Herzegovina, averaging 3.6ha split over many plots. Dairy is the most important sector for these farmers who typically own one or two cattle, often a traditional low productivity breed although this is changing (IFAD 2006). In former times most of the small holders worked in industry and tended their farms part-time, today with the lack of employment opportunities in rural areas, most of the farmers depend entirely on their small-holdings for a living, this is true for almost half the rural population (a quarter of the national population).

Despite the large number of people working in farming, about 50% of food is imported in Bosnia-Herzegovina and there is substantial room for growth in domestic agriculture. In order for this to happen the quality and intensity of production must increase. Cattle husbandry in the area is typically low-input low-output, consisting of six months grazing followed by six months housed in stalls. Besides grazing hay and crop by-products are also fed (IFAD 2005).

Kosovo

The Kosovo conflict of the late 1990's was built on divisions between ethnic Serbs and Albanians living in the region that have existed for hundreds of years. Within the former Socialist Federal Republic of Yugoslavia, Kosovo existed as an autonomous province from 1974 until Slobodan

Milosevic came to power and removed this status in 1989. Tensions rose with increasing Kosovan guerrilla attacks on Serb targets, this led to a brutal military crackdown by the Serb-Yugoslav army. A programme of ethnic cleansing was initiated and hundreds of thousands of Kosovo Albanians fled to neighbouring countries. NATO intervention in the form of air strikes on Serbian targets in Kosovo and Serbia finally brought the war to an end. Thousands of lives were lost (BBC 2012).

From 1999 to 2008 Kosovo was administered by the UN, after which it unilaterally declared independence from Serbia, the state is not recognised by many countries in the world. Today the population is 1.8million; unrest between the 90% ethnic Albanian majority and the Serb minority continues (BBC 2012; The World Bank 2012).

The 1999 conflict led to food shortages, a lost harvest, destroyed homes and loss of employment. About 75% of a rural population of 1.1million fled their homes, many fleeing the country although most returned after the war. In some regions agricultural output had stopped almost entirely, with a dire lack of stock with the loss of 54% of cattle and 65% of sheep. This led to a significant dependency on food aid relief.



Figure 1: Map of South-Eastern Europe.

Restocking

Restocking livestock has been often used as a form of development after humanitarian disasters for over thirty years. Early projects restocked nomadic pastoralists post-drought to rehabilitate their livelihood and reduce dependency on food aid, primarily in East Africa. In the recent times the field has expanded to include agricultural development programmes that provide a few animals to those not entirely dependent upon livestock.

The appeal of restocking as a means of development is that it provides a sustainable food and income supply. Furthermore, the animals multiply allowing the project to grow and reach even more beneficiaries. Besides the primary producer there are many other people whose livelihoods depend upon the trade and production of livestock and their products, including livestock traders, transporters, auctioneers, butchers, processors, feed, veterinary providers, agricultural suppliers and retailers to name a few. All these stakeholders benefit from the impact that successful restocking can have on the wider agricultural economy.

A restocking project can fail for many reasons, but fundamental to success is that restocked animals survive and multiply. This is intuitive and highlights the importance of animal health to both minimise mortality and ensure high levels of fertility.

Restocking in Bosnia-Herzegovina (1996-97)

The Emergency Farm Reconstruction Project

A survey in 1996 found that in rural areas humanitarian relief accounted for over a quarter of household food. The principle reasons for this deficit were the lack of livestock and machinery. There was an urgent need to kick start the agricultural economy and increase food production.

The Emergency Farm Reconstruction Project began in April, 1996 and due to the urgency of the situation it was completed before the end of 1997 at a cost of US\$41.5million. The project was co-funded by the World Bank, the International Fund for Agricultural Development (IFAD), the European Union (EU), The Netherlands, Germany, the Federation of Bosnia and Herzegovina Government, Qatar and the Saudi Fund for Development. The project initially focussed on areas hardest hit by the war (Bihac, Gorazdhe, Mostar, Sarajevo, Tuzla and Zenica) (IFAD 1997) but ultimately covered most of the Federation of Bosnia-Herzegovina.

The project included the following components (Ablasser & Koch 1998):

- 1) The import of farm machinery, particularly tractors provided on credit.
 - a. The farm machinery aspect (US\$27.3 million) will not be discussed in detail.
- 2) The distribution of imported and domestic livestock.
- 3) The rebuilding and development of veterinary services.

In the livestock component 6,187 pregnant heifers, 5,000 sheep and 1,372 goats were imported. There were approximately 9,000 beneficiaries. Although a large number this is only a fraction of the livestock lost during the war. The imported cattle were intended as dual purpose dairy-beef cattle and the imported breeds included Simmental, Brown Swiss, Gray Tyrol and Black and White (Holstein - Friesian). These breeds are more productive but less hardy than local breeds. It was part of the intention of the project to not only increase the number of stock but increase the genetic quality of the national herd in terms of potential output and yield. Sheep breeds largely consisted of hardy Eastern European breeds. The goats consisted of imported Saanen and Alpine breeds. Cattle and goats were given on a credit basis with repayment expected, sheep were given as gifts. Before restocking the average cattle recipient had one cow and the average goat recipient had five goats.

Levels of animal disease and mortality amongst restocked animals can be extremely high, particularly if the animals are not sourced locally. The reasons for this include the challenging environments that restocked animals are often placed in. In the recovery phase after a humanitarian disaster fodder and animal health care may be limited. The owners of the stock may not have the know-how or the time and energy to properly care for them. If non-local animals are used they may be highly susceptible to local diseases and not well-suited to their new environment and conditions. This is particularly true when high productivity breeds are used, although they can bring greater yields and growth rates they often require higher levels of nutrition, husbandry and health care (Ablasser & Koch 1998; IFAD 1997).

Cattle

Despite the challenging post-war conditions under which the project was implemented mortality of restocked cattle was 4.4% and 1.1% aborted by evaluation (1997).

Households usually received one cow. The cow was usually looked after by the woman of the house, with the husband sometimes involved in other employment, thus recipients had an additional source of income. In 1997 each distributed cow produced on average 2,700 litres a year or 11 litre/day. Although dairy cattle in countries with a developed dairy sector will yield an average of 20-30 litres/day, the yields achieved with the dairy-beef breeds in the setting of the restocking project were very satisfactory.

Just under 95% of the imported pregnant heifers produced a calf. However, 85% of these calves were slaughtered and not kept for breeding. This provided a short term cash income for the farmers. However, it severely reduced the impact of the project which is partly derived from A) herd growth and B) breeding with these high quality stock in order to increase the productivity of the national herd.

Getting the imported cattle back into calf was problematic. A year after importation only two-thirds had conceived after calving, taking on average 160 days to do so (this is double the optimum and reduces productivity). A reason for this was inadequate nutrition and the harsh climatic conditions. Cows that do not conceive are likely to be culled compromising project impact.

Cattle recipients were able to generate enough income to service the loan under which the cow was provided (Ablasser & Koch 1998; IFAD 1997).

Goats

The goat aspect of the project largely failed. Acquired goats were expensive (US\$340-485), about 14% were returned to the supplier as they did not meet technical specifications and 3.5% died before they were distributed. Subsequent to distribution mortality rates were high (30% at one year evaluation) and 34% aborted. The surviving nannies only produced on average 0.6 kids each over the next year (under half the optimal rate). Many goats experienced pneumonia, internal parasites, Q-fever and other diseases. These failings have meant that farmers were unable to repay of the project loans for the goats. As goat restocking only made up 2.3% of the total project it did not compromise overall project viability, however, it was costly for the project, particularly for the recipients, who on the whole were subsistence farmers (Ablasser & Koch 1998; IFAD 1997).

One reason for the problems was a widespread lack of experience with goats as keeping them had been prohibited for 50 years (Ablasser & Koch 1998).

Sheep

Evaluation details for the sheep were not available, it was believed that they did well. As they were given as gifts, recipients could derive substantial gains. Failure to obtain meaningful follow up information, although unusual in this project, is a common problem in restocking project. Follow up data is required in order to detect and react to events and problems experienced on the ground, without this errors will be replicated in the future. Monitoring and evaluation is also required to show donors and taxpayers how their money has been utilised. Ongoing husbandry and health care

should be provided in restocking programmes, this provides an opportunity to collect evaluation data (Ablasser & Koch 1998).

Procurement, quarantine, disease and distribution

Animals were normally selected by a visiting group of experts in the exporting country (Austria, Germany, Hungary and the Netherlands) (Ablasser & Koch 1998; Heffernan & Goe 2006). Method of transport of imported stock is unclear, animals were transported huge distances and it is recognised that problems occurred (IFAD 1997). Some delivered goats were below the required weight. Also draughty conditions during transport contributed to eye problems, which in some led to blindness.

According to national legislation, after arriving in Bosnia animals had to spend 30 days in quarantine before transportation to the beneficiaries, this was later reduced to 16 days, within which veterinary checks were performed and only animals free from specified diseases would be admitted. During quarantine 1% of cattle died, 0.6% were culled and 1.1% aborted; 12.7% of cattle required veterinary treatment in quarantine, Leptospirosis was the most common problem. The interim evaluation report found that hygiene in quarantine stations was sub-standard, although several quarantine stations were used and standards varied.

Livestock travelled by truck from the quarantine station to the beneficiary. As the country had recently emerged from war there was a shortage of quality livestock transporters and sub-standard transporters were used. Some journeys were long (over 500km). Trucks sometimes had to pass through unsafe areas where some level of mistreatment of the drivers and livestock did occur on occasion. Sometimes beneficiaries were ill-prepared for the animals.

Beneficiaries played a relatively small role in animal selection, whilst this facilitated the speed with which the project was executed it on occasion resulted in dissatisfied recipients. In some programmes lack of beneficiary participation has caused major problems; however, in this project the vast majority were satisfied with the animal they received and the project reached a large number of beneficiaries in a very short space of time.

After distribution, 71% of stock required veterinary treatment during the year. Q-Fever was a problem in goats. Traditionally Q-fever was not present in the Bosnia. This zoonosis causes abortion in goats and fever and abortion in humans; it has led to major public health scares in the Netherlands in particular. Project animals may have already been infected before export or they were infected by unidentified sources (Ablasser & Koch 1998).

Insurance

Beneficiaries were supposed to insure their stock until the credit had been repaid. However, only 50% of cattle recipients did so and no goats recipients. Premiums for goats were excessive due to the high price paid for them. Upon loss the insurance payment was given to the project (Ablasser & Koch 1998).

Veterinary Services

Over US\$2million was spent on this aspect providing for 40 veterinary stations. The stations were equipped with veterinary diagnostic and field equipment, surgical instruments, injection equipment other consumables and furnishing. Pharmaceuticals provided included vaccines and fertility drugs; Artificial Insemination (AI) equipment was also given, this comprised a vehicle, liquid nitrogen and

storage equipment and bull semen. Ultrasound scanners and laboratory equipment and reagents were also included. Farmers had to pay for veterinary treatments but not for AI services. Payments were to be made so as not to undermine the development of the private veterinary sector (Ablasser & Koch 1998; IFAD 1997).

It was hoped that the re-established veterinary and AI services could assist both the restocked animals as well as the wider livestock sector. One problem was that the services were not available until several months after restocked animals had arrived.

Education

As there were roughly 9,000 farmers within the project there was insufficient time and resources to provide “proper” training. Booklets instructing on how to manage the livestock including fodder production were distributed (Ablasser & Koch 1998).

Benefits

Assistance with arable production via the distribution of machinery within the project was estimated to lead to 55,000 tons of grain, potatoes, vegetables and fodder. When restocking animals advanced thought has to be given to their nutrition. Providing animals, particularly high productivity breeds, without ensuring adequate nutrition will lead to disaster. Despite facilitating feed and fodder production this project still experienced some problems in this area.

The project was estimated to lead to 17 million litres of milk production in 1997. The project brought benefits to 11,500 households at a cost of US\$3,600 per household much of which was recoverable for subsequent reinvestment (Ablasser & Koch 1998). Many recipients received a single animal with the fundamental aim of preventing their family going without milk again (IFAD 1997).

Of the livestock beneficiaries 64% said the project had contributed to the recovery of the farm. From 1996-97 dependence on humanitarian aid reduced from 27% to 16% and self produced food increased from 33% to 51% of diet. However, 39% said that the income received from the livestock did not cover the loan repayment (Ablasser & Koch 1998).

Most farmers (89%) said they were happy with the breed selected and 82% were happy with the quality of the stock. Based on a sample of participants, herd sizes had increased over the first year of the project by 25% for cattle and goats and 5% for sheep. Goats increased more than sheep despite the perceived failure of the component, this questions how successful the sheep component was and also contradicts other monitoring data where high mortality and low kidding rates were reported. However, it highlights that herd growth can be affected by many factors external to the programme.

The speed of implementation and successes of the project was in part due to the support and participation of the Bosnian government and an effective management infrastructure with a central implementation unit and four regional implementation units.

Monitoring and evaluation

Except for the sheep distribution, exceptionally detailed data was collected during this project particularly on animal health and production performance, although at interim evaluation this was

not the case (IFAD 1997). Although agreement to keep these records was supposed to be one of the criteria for receiving animals, the interim evaluation found no evidence that this was being done (IFAD 1997). Details of livelihood outcomes such as aid dependency were also collected. This was in spite of the challenging post-war situation that the programme was carried out under.

Follow up and evaluation is crucial yet is often neglected by restocking projects, despite the inclusion of guidance on monitoring in restocking standards and guidelines (Livestock Emergency Guidelines and Standards Project 2009). Collecting follow up data allows a project to A) quickly recognise and react to unforeseen problems, B) adjust future restocking programmes to avoid repeating mistakes and C) share details of restocking experiences with other organisations to allow the wider discipline to learn and progress.

Problems

Targeting

If the recipients are not able or motivated to look after restocked animals a project is doomed to failure. Efforts to support beneficiaries can come to nothing if the wrong recipients are targeted. This is one of the hardest aspects of a project to get right.

In this project eleven criteria were devised to ensure that beneficiaries had sufficient knowledge, experience and resources to look after the restocked animals and develop a viable farm. In addition there were criteria to ensure priority was given to those most severely affected by the war. Selections were made by the municipality. Although most recipients were farmers, a number were found to lack livestock experience or the necessary housing and land; 62% of recipients were returning refugees and excessive compromises had been made to incorporate them, many were demobilised soldiers (IFAD 1997). In the World Bank evaluation report it states (Ablasser & Koch 1998):

“Animals are a very fragile asset and it is inappropriate for such assets to be acquired by persons who cannot make proper use of them. War-affected persons not qualified to take care of livestock, especially cattle, preferably should have been given other assistance.”

This issue is highlighted by the fact that only 81% of farms produce their own fodder, 34% did not provide concentrate and 40% had no money to buy concentrates.

Loans

Machinery and livestock were provided on credit, intended as a means of cost-recovery rather than formal credit with the expectation of full repayment. However a number of problems culminated in inadequate levels of repayment, at evaluation (April 1998) only 52% of payments had been collected. Reasons for this are as follows (Ablasser & Koch 1998; IFAD 1997):

- Farmers had little experience of credit and loans.
- Some stock in the project and stock distributed by other NGOs were given as gifts. This caused confusion and some believed that repayment was not required.
- Confused messages were given out by local politicians.

- Beneficiaries were not selected on the basis of credit-worthiness.
- The bank used for loan recovery was not involved in the selection of recipients and credit agreements, and did not have its own money at stake in the loans. This diminished the efforts made to retrieve the loans.
- The bank collecting the loans had little public presence in the country.
- Loans were intended to be paid in Deutsche-Marks, yet few had access to foreign currency.

Credit based restocking projects can sometimes saddle recipients with debts that they cannot afford, especially if restocked animals were not productive, as was the case with the goats in this project. The interim evaluation of the restocking project found many recipients had no intention of repaying the loan (IFAD 1997).

Overall performance

The project responded extremely quickly and in a large scale to an urgent situation, levels of monitoring and evaluation were excellent except for the sheep component. Many benefitted from the project. Unfortunately weaknesses in husbandry and animal nutrition limited the project's impact and credit repayment was a problem. During an emergency rehabilitation project, reaching intended beneficiaries is more important to "success" than the proportion that repay their loans (IFAD 2011b). High levels of slaughter of high quality progeny of project heifers rather than retaining them for breeding also reduced long term impact. This may reflect 1) lack of advice provided to farmers, 2) a short term need for food or cash from the slaughter or 3) an inability to support these animals. The project was successful in increasing food security despite challenging post-war conditions.

Bosnia and Herzegovina Small Farm Reconstruction and Development Project (1997-2001)

The main objectives of this project were to help the small scale farming sector to move away from subsistence towards market based agriculture by increasing outputs that surplus could be sold to generate an income. The second objective was to improve the productivity of livestock through the use of more productive breeds (IFAD 2001).

This project continued on from the Farm Reconstruction Project so that more people could benefit, incorporating some of the lessons learnt from the former project. The project involved the distribution of 11,401 pregnant heifers, mostly Simmental, and 12,343 sheep, of the Pramenka breed (or Pramenka cross) provided on a credit/loan basis to 5,267 poor households (25,000 people). The project cost was US\$16million, mostly funded by IFAD. Stock were imported or acquired locally. Stock were distributed as a subsistence package (one cow or five sheep) or a commercial package (up to three heifers or up to 25 sheep). Subsistence packages made up 80% of the distributed packages, less than intended due to an inability of the farmers and the market to support larger commercial enterprises. Heifers came with one year of insurance protecting the restocking agency against their loss. Breeding bulls (25) were provided to locations too remote to access AI. There was no demand for goats after the failings in the previous project. Pig procurement was cancelled due to excessively high pig prices (IFAD 2001).

Again agricultural machinery was also distributed within the project, including equipment for development of commercial farming, for example the provision of sixteen milk cooling tanks. Some aspects of training on livestock keeping was provided, however some of the training had to be cancelled due to NATO airstrikes. Efforts to improve pastures were abandoned. Booklets on husbandry and livestock care were again distributed and further funding was provided for municipal veterinary stations.

The project managed to benefit a large number of people, improving food security, developing livelihoods for the recipients and the wider agricultural sector. However, the objective of developing market orientated production was limited by the lack of developed agricultural market chains and infrastructure. Dairy products are largely perishable, in order to profit from their production there has to be the facilities to collect, process and distribute them to customers in a hygienic manner. This requires significant technical inputs in terms of knowledge, equipment and facilities. This did not exist, limiting the scope for farm development and project impact. Although there were milk collection centres available many lacked necessary compressors and cooling equipment. These deficiencies were compounded by the low incomes and limited spending power of consumers (IFAD 2001).

Many of the problems with loan repayments that occurred in the FARM Reconstruction Project were experienced again (IFAD 2001).

Lessons learnt

A number of issues arose during the first post-war restocking programmes in Bosnia-Herzegovina (IFAD 2001; IFAD 1997; Ablasser & Koch 1998):

- Requirements during post-disaster rehabilitation should not be confused with what is needed in a development setting when stability has returned. In these projects greater use of restocking based on gifts may have been more realistic.
- Full participant understanding of the credit scheme used should be ensured along with the full support of the government.
- Ensure the bank involved in the loan collection is exposed to the negative effect of non-repayment to ensure that it is fully motivated to collect the loans.
- Allow some flexibility in what is provided to restocked households rather than a one size fits all. This increases the chance of success, profitability and loan repayment.
- A market for the relevant livestock products should be ensured before distributing commercial livestock.
- Farmers need to be organised into producer associations in order to influence the market through collective action.
- Adequate training is required by farmers, particularly when restocking with unfamiliar high productivity breeds.
- Similarly adequate veterinary assistance is required particularly for improved but high maintenance breeds.
- Assistance should be provided for the development of non-livestock dependent livelihoods, to assist those unsuitable for restocking and provide an alternative income for those with stock.
- When markets are fully functional and there is a supply of animals, cash loans are more appropriate than in-kind loans. This allows each farmer to choose which animals they purchase and when. However, technical support will be required if production methods are to be improved.

Further livestock development

Follow on livestock projects in Bosnia-Herzegovina recognised that after stabilising food security through restocking the major factor limiting further development of the livestock sector was lack of market and necessary market chain infrastructure particularly for the dairy sector. With the emergency situation now in the past, the focus turned to the development of profitable commercial small holdings that can provide an income for farmers (IFAD 2011a; IFAD 2005; IFAD 2012).

Impact on genetic diversity

These projects in the Balkans involved the importation of large numbers of exotic breeds after the loss of large numbers of native breeds. The long term impact of this on genetic diversity and resources has been considered as another negative consequence of humanitarian disasters and restocking. Almost 700,000 cattle were imported into Bosnia-Herzegovina between 1996 and 2002. Heffernan and Goe estimated that the pre-war cattle population consisted of 20% native Buša cattle,

after restocking almost none were left; conversely Simmental's went from making up 30% to 75% of the national herd in the same period (Heffernan & Goe 2006).



Figure 2: ©FAO/Liana Miuccio. A Smallholder farm family in Kosovo receiving a heifer that has been donated by the project. - - FAO/World Bank - Emergency Farm Reconstruction Project: OSRO/KOS/009/WBK, (FAO 2000).

Kosovo

Many of those that fled during the war abandoned their animals, as a result many were stolen, slaughtered or starved. Nearly half the national herd for sheep and cattle was lost (Heffernan & Goe 2006). Livestock are often targeted in conflicts in order to damage morale and destroy enemy food resources (WSPA 2005). As a poor farmer in Kosovo Gani Kadriu's story was typical "I produce mainly for me and my family, "...I'm planting wheat, maize and vegetables. Before the war, I had 3 cows and there was enough to eat for everybody. During the war I lost everything. They damaged my house, and killed or stole my cows and chicken." (FAO 2000).

The Emergency Farm Reconstruction Project in Kosovo (2000-3)

The Emergency Farm Reconstruction Project in Kosovo had a very similar purpose to its namesake in Bosnia-Herzegovina (The World Bank 2003). That is to "jumpstart" the agricultural economy and increase food security principally by providing livestock and machinery. Veterinary services and governmental capacity were also supported. The project's primary concern was post-conflict rehabilitation rather than long term development. People and regions most severely affected by the recent conflict were targeted.

Costing US\$18.4 million the project was funded by the World Bank, the United Nations and the Governments of the Netherlands, Sweden and Italy. The project included all ethnic groups and was implemented primarily by FAO with the assistance of NGOs and the government. Local and international experts were used (The World Bank 2003).

An FAO video from the project is available at (accessed 12nd Feb 2012) (FAO 2000):

<http://www.fao.org/News/2000/001104-e.htm>

Cattle (40.9% of the budget)

The cattle restocking component provided 4,399 pregnant heifers and 92 bulls to roughly 4,500 beneficiaries. Heifers were mostly Simmental with some Brown Swiss cattle and Grauvieh. This represents only a fraction of the 200,000 cattle lost during the war. They were provided to households that previously owned cattle which had all been lost during the war, within the municipalities suffering the biggest agricultural decline during the war (Skenderaj/Srbica, Gillogoc/Glogovac, Decan/Decane, Kline/Klina, Vushtrri/Vucitrn, and Peje/Peja). Recipients were also provided with veterinary assistance, concentrate feeds and AI. Only cattle were restocked due to problems experienced with sheep and especially goats in other restocking projects in the region (see Bosnia-Herzegovina) (Ablasser & Koch 1998; The World Bank 2003).

Imported cattle were flown in from Germany and Austria, 62-68 heifers at a time in roughly 40 flights for the first phase (2,400 animals). This, rather than transport by rail or truck, was done to reduce mortality and abortions. No animals died during the flights but eight sustained injuries. Four cattle died during distribution within the country. Whilst at holding centres animals received prophylactic veterinary treatments such as vaccination (Heffernan & Goe 2006).

The second offspring of restocked cattle were intended to be handed out to other members of the community to increase the numbers benefitting from the programme (i.e. a credit-in-kind scheme rather than a gift). However, this rarely happened and it was not enforced. Some beneficiaries said they did not know about the "pass on the gift" scheme. Those that did give away livestock often

gave it to family members. Owners of breeding bulls often did not charge for their services contrary to the project intentions (The World Bank 2003).

Animal health and productivity

At project completion 4,188 heifers were still alive, 82% were still on the farm that received them. The heifers had given birth to 4,326 calves (almost a calf per heifer) of which 3,793 were still alive at evaluation (88%). This means that on average there were 86 calves for every 100 heifers. Thus after calving, the project had contributed over 8,000 cattle to the national herd. From these calves 74% were still present on their farm of birth. Following calving three-quarters had got back in calf at evaluation.

The bulls serviced 85-100 cows per year, i.e. roughly 7,500 services. Bulls born to project heifers would then further contribute to upgrading the genetics of the national herd. Three years after the project started many of the original heifers were now pregnant with their third calf. Services by bull rather than AI were preferred by some remote villagers.

By evaluation in late 2003, 3.5% of imported heifers had died, 1.8% had been slaughtered (often for disease), 0.6% had been stolen. About 10% of heifers had been sold, sometimes because the household could not cope with the animal, sometimes a local breed was then bought in preference. This was seen by some as a mechanism for correcting for errors during the selection process. Sometimes recipients needed to sell the cow to pay for essentials such as rebuilding housing. Slaughter of these expensive high genetic merit cattle was seen as a real waste.

Production parameters were encouraging. Cows had a calving interval of 14.6-14.8 months. Daily milk production was 12.5 litres. Just over 2% of heifers aborted and 5% of calves died at or shortly after birth.

Brown Swiss cattle fared the worst and were dropped in latter phases of the project. Farmers received training (4,560 in total) in various aspects of farming with improved breeds ("feeding, calving, calf rearing, housing, breeding, record keeping and animal health issues").

Although an emergency operation, the fact that the initial imported cattle have now more than doubled in number since arriving due to successful breeding implies that the project will be sustainable (The World Bank 2003).

Veterinary Services (7.4% of the budget)

The project provided equipment to private veterinarians and AI services. Training was provided for 65 veterinarians and vet technicians. Amongst other things, this training covered 1) large animal reproduction, 2) AI, 3) nutrition and 4) Calf rearing. Bovine semen (21,000 doses) was provided from various continental beef, dairy and dual purpose breeds. Farmers did not have to pay for the veterinary services (they received four general and two AI visits free of charge).

A central state veterinary laboratory was equipped as well as three regional state veterinary stations. This helped to regenerate and modernise veterinary practices and improve productivity, this was further assisted by support given to AI services. Support given to the state veterinary sector, including a laboratory, will help support national disease control campaigns, for which high throughput diagnostics are often required (The World Bank 2003).

Farm Mechanisation (31.1% of the budget)

Half of Kosovo's tractors were damaged or destroyed during the war. The project provided 202 new tractors as well as other farm equipment. Over 2,400 damaged tractors were repaired (The World Bank 2003).

Implementation

Having built on previous restocking experiences in the Balkan region, implementation was effective. Key factors behind this were the use of existing NGOs on the ground, an efficient loan recovery setup, clear and consistent criteria for selecting beneficiaries and good project planning and management. The need for post-restocking follow-up, monitoring and evaluation was understood. This allowed the project to detect operational problems early and provided an opportunity to facilitate and oversee loan repayment.

Beneficiary selection

This is a crucial step in a restocking project, selecting the wrong beneficiaries means that valuable livestock are distributed to people that will not look after them. The process needs to be transparent with community involvement, if not it may lead to anger and bitterness from the non-beneficiaries in a community. Beneficiary selection was based on the following steps (The World Bank 2003):

- 1) Select municipalities.
 - a. i.e. those most damaged during the war, particularly regarding losses to the agricultural sector.
- 2) Prepare a list of beneficiary villages in consultation with the municipality.
 - a. This considered human and livestock population and ethnicity.
 - b. Villages with an average of less than one cow per household were considered.
 - c. Enough cows were given to boost the village average to one cow per house.
 - d. Villages not dependent upon cattle were excluded.
 - e. Final village selection was made in conjunction with local stakeholders and implementing organisations.
 - f. Special consideration was given to include minorities and enclaves, considering aid dependence and vulnerabilities (e.g. wealth, presence of landmines).
- 3) Publicise the project within the villages.
 - a. This would include discussion of the selection criteria.
 - b. Meetings were held with the village council, as well as woman's groups and political opposition groups.
- 4) Prepare a list of beneficiaries in consultation with the village.

- a. The individual selection criteria selected "...for cows, families who have lost all their cows, have vulnerable members (children, elderly, pregnant women, widows and persons who are physically challenged), and have limited means to buy milk due to their lack of income" (The World Bank 2003).
- b. Further criteria included: "experience (had a cow before), need (no cow now, small children, members with special needs), and capacity (shelter, grazing land, feed)." (The World Bank 2003).
- a. The final list was made public and grievance hearings were conducted.
- b. The project was to include all ethnicities and about 10% of cows and tractors were set aside for minorities.
- c. Beneficiaries were visited before disbursement of cattle to verify they had sufficient shelter, grazing, feed, etc...)

Two to three months was allowed for this process. This process was carried out by different NGOs in different areas, that is Action Against Hunger, Mercy Corps International and ACTED (L'Agence d'Aide à la Coopération Technique et au Développement). Possible improvements identified included greater village participation in recipient selection, obtaining improved village level demographic and livestock data and allowing NGOs and not government departments to select minority beneficiaries as they are less likely to be biased. As village meetings were sometimes tense it was decided to have international staff present to diffuse tensions. Some large families already owning a single cow were later included. Criteria were not always applied consistently, in one case the municipality insisted village selection was based on war damage.

When evaluated, about 90% of heifer beneficiaries were found to have fitted the key selection criteria (no cow, had a cow before and had a barn). Female households were not especially prominent, partly because they lacked the resources to look after a cow. By and large the selection process was successful, however, 15% of recipients may have been too poor to look after the cow (evidenced by the sales, deaths and slaughters). This may have been due to families that had lost someone in the war being secretly prioritized even if they were otherwise unsuitable, in fact some village leaders were concerned that these people were not deliberately targeted.

Beneficiary selection was very successful thanks in part to strong involvement of local organisations and clear communication. About 9,600 households received cattle or machinery, 900 hundred received both cattle and machinery (The World Bank 2003).

Evaluation

Benefit-Cost analysis was done; this found big returns on the project investment, with a Net Present Value estimated at US\$21.8million and an Internal Rate of Return of 32.2% (with a 10% discount rate). This was estimated using data from the monitoring program of the project. The main benefits are approximately 2,600 litres milk per year per cow (mostly for home consumption) with a value of US\$650, the value of the cow and her offspring. As many bull recipients did not charge for their services, they would not benefit (financially) unless they sold their bull, however, other local farmers gained, as they had free use of the high genetic merit bull's services (The World Bank 2003).

Most decisions were made by the implementing international organizations and not the beneficiaries themselves.

A project beneficiary survey found that most (including non-beneficiaries) thought beneficiary selection was fair, although some were unhappy that those unable to look after the cow due to war damage were not to be included, e.g. damaged buildings or they had lost family members necessary for looking after the cow. In fact, early on in the project, immediately after the war, families of those that died in the war were much more likely to be chosen as recipients. For these households, non-livestock or small stock may have been more appropriate. Difficulties with AI were experienced by some, a few lived too remotely to access the breeding bulls. However, overall, fertility figures were very good. About 90% were satisfied with the standard of vet care.

The cattle were found to have a positive psychological benefit for villagers and provided something to do, which was very important immediately after the war. Beneficiaries reported that the project's impact on the wider agricultural sector was minimal, unlike its impact on food security. Commercial expansion of herds was limited by lack of resources to care for more than one cow, low product demand and low milk prices due to cheap imports, and a lack of commercial dairy infrastructure (e.g. collection and processing centres).

Despite the extensive follow-up support provided, some required more. Cattle restocking was seen as a priority by recipients, although the need for breeding bulls was seen as less urgent. Some found the high maintenance improved breed cattle too much, but this was minimised by the provision of animal feed to beneficiaries. The free vet care provided was also appreciated.

At evaluation half of the bulls had been slaughtered. Standards of husbandry and care for the bulls were limited causing poor performance and sometimes aggression.

Some involved in the project believed the passing on of cattle offspring should have been enforced. Problems in this area are common in restocking projects. Other projects have found it useful to pair up primary and secondary beneficiaries at the start the project. This way there is more peer pressure on primary beneficiaries to hand over the calf. Also it helps to minimise nepotism and dishonestly at selection of second generation recipients. Finally it means that primary and secondary beneficiaries can be trained together and can assist each other when needed.

Participation and involvement of stakeholders, although slow at first, was seen as successful (The World Bank 2003).

Despite the challenges of conducting such a large scale project amidst the aftermath of war the project was very successful. The UN Interim Administration Mission in Kosovo concluded (The World Bank 2003):

“The EFRP project has been very well designed and its implementation well supervised and monitored. It can be taken as a model”.

Overall performance

Having learnt from previous experiences the project was well implemented and increased food security. Due to its success the programme was expanded to distribute twice as many heifers than was originally planned.



Figure 3: ©FAO/Liana Miuccio. Kosovan Farmer, who received livestock to help rebuild his herd, with one of the heifers. FAO/World Bank Emergency Farm Reconstruction: OSRO/KOS/009/WBK (FAO 2000).

Conclusion

Post-war restocking projects in the Balkans have been extremely ambitious and are on a different scale to many other restocking projects in terms of number and value of livestock provided, and the number of beneficiaries. Before the war the region was largely middle income with good standards of education, this provided a setting in which projects of this type could be successful. Nevertheless, immediately after the conflicts rural livelihoods had clearly plummeted with large numbers living below the poverty line.

The restocking activities were always done in tandem with the development of veterinary services and with support for livestock care. Increasing levels of veterinary and husbandry support were provided, eventually providing animal feed; this was due to the reduction this causes in mortality and cull rates. The importance of herd growth and fertility was recognised and supported through provision of bulls and AI services. The provision of agricultural machinery was also necessary to rapidly establish farm productivity to boost food security. Restocking cannot directly help the poorest of the poor as they do not have the means to care for livestock, development in the wider agricultural economy and in non-livestock sectors is also required.

Initially a variety of cattle, sheep and goats were provided but high purchasing costs and mortality amongst all but cattle meant that latter projects focussed on pregnant heifers.

In order to improve the genetics of the national herd exotic high productivity breeds were imported at considerable cost. Restocking with non-local animals is often thought of as 'asking for trouble' as they may be highly susceptible to local diseases and may be unsuitable for local conditions. This did not cause the problems that it has elsewhere, but still 30% of goats died and certain families sold or slaughtered the restocked animals as they were unable to care for them.

Livestock were provided as grants, cash credit or in-kind credit in the form of passing on offspring to further recipients. A number of issues were identified, such as the increased flexibility that cash loans provide the beneficiary, the reduced viability of loans in emergency situations and the difficulties in getting beneficiaries to pass on their livestock's offspring. In emergency situations the priority should be reaching those in need rather than loan repayment.

The importance of selecting the right beneficiaries was highlighted by both the failure of some to look after the restocked animals and failures in loan repayment. Community involvement in selection is important for acceptance and identifying the right people. However, this can lead to greater subjectivity and sometimes inappropriate beneficiaries were selected as they suffered the most during the war.

Reported mortality amongst cattle was extremely low for a restocking project. Compared to restocking in the poorest nations in the world, animals in this project were possibly faced with a lower burden of disease and greater levels of husbandry and although winters were severe they were less taxing than for example droughts in East Africa. The projects seem to have been well managed and efficient. Of particular note is the ability to learn from earlier mistakes and make necessary adjustments. Effective follow-up, monitoring and evaluation were key to this.

Restocking can only do so much, without a market for their products there is little scope for more than subsistence farming. Subsequent projects in the region have attempted to provide equipment and funding to develop market chains to allow small scale farmers to generate an income from farming. Development of commercial farming brings far more players into the agricultural economy supporting various livelihoods and not only farming itself.

The restocking experiences in the post-war Balkans illustrate some of the key issues concerning restocking projects. They highlight some of the common problems and limitations, but they also show the impact that restocking can have on livelihoods and food security in a relatively short period of time. These restocking programmes were not simply about handing out livestock, a range of activities, both long and short term, had to be implemented in order to obtain success.

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