

**Project Proposal from Public Association “Kogal”
Within the frameworks of the CBA program**

PROPOSAL SUMMARY

1. **Project title:** Autumnal/early spring fields and pastures irrigation as an adaptive mechanism for efficient use of water resources in Southern Kazakhstan. “Autumn irrigation”
2. **Project Site:** Republic of Kazakhstan, Zhambyl region, Talas area, village named after Sady Shakirov.
3. **Proponent:** Public Association «Kogal», Zhambyl region, Talas area, and village named after Sady Shakirov, Konaeva Street, 21. Contact Person - Ospanbekov Anuarbek

Members of local community of Sharkirov village has established Initiative group which consists of 13 active members. In 2005 it has been registered as Public Association “Kogal”. PA “Kogal” is a non-profit organization. The aim of the association is to solve the problems of the village with the united efforts. Results of the association work: involvement of village residents in streets cleaning; explanatory work with cattle owners regarding muck cleaning. Decision was taken to unite forces to solve ecological problems of the village, particularly, to renew degraded lands.

In 2006 PA conducted project “Participation of local community in the activities aimed to preserve pastures and prevent land degradation through sowing feed crops and developing forest shelter belts”.

Besides project activities members of local community will develop new strategy for developing grazing farming; participate in the monitoring of fields productivity, growth of cattle when using fodder; experience exchange with neighboring villages.

In 2008 PA “Kogal” initiated development of the Concept of the project on adaptation of rural communities to change climate risks. The objectives, aims and activities of the project have been discussed and the project concept has been written. Ospanbekov Anuarbek, director of PA “Kogal”, has been appointed during the meeting as main executor and project manager. The concept was approved by CBA and received the planning grant on development of the full-scale project.

4. **Project Objective:** To reduce climate change-driven soil degradation and salinization risks.

During the last few years there has been a stable decrease of summer and winter precipitations in the region which led to a decrease of water-level of Talas River. Due to this, the volume of water in irrigation canals has decreased the last 10 years, leading to reduction of volumes of water available for irrigated agriculture. This has led to unsustainable methods of irrigated agriculture, leading to salinization and other forms of degradation. The cost of water – 1000 m³/16,5 tenge, however, there is a lack of water, especially for the LC members who live at the end of the canal. Because of infringement of methods of irrigated agriculture and bad irrigational system, the most part of the irrigation grounds are at salinization risk salted and degraded to different extent. Nowadays these degraded fields are used by local community members for unsystematic grazing which leads to further land degradation which have especially amplified recently because of climate change towards aridity.

5. **Authorized Representative:** Ospanbekov Anuarbek Tel: +7-726-41-36-238
6. **Cooperating Organizations:** Limited Partnership «Zhardemshi», 6 household of Sadu Shakirova.
Tel: +7-726-41-36-238
7. **Start-Up Date:** 1 May 2009
8. **Project Period:** 24 months
9. **Total Project Cost:** \$ 71645
10. **Amount Requested:** \$ 41140 (Note: The Planning Grant was approved \$ 2000)
Local input: \$ 30505 (cash and kind)

11. Brief Project Description:

During stable climate conditions (1950-1990) the water level in the Talas River was high, the main irrigation Sharuashlyk canal (12 km length) functioned in summertime, and villagers of an aul Shakirov had 500 ha of the irrigation grounds. Since 1998, the water level in the Talas River has decreased, and during summertime the water in the canal does not reach the level of LC lands. Ground waters are salted and cannot be used for irrigation. The irrigation grounds are not cultivated. Villagers have lost their basic income which they had from irrigation agriculture. Today LC members basically live thanks to cattle breeding. Local communities attribute these impacts to climate change.

In recent years an increase of climate aridity is observed on project location territory: reduction of mid-annual quantity of precipitations, increase of years and winter temperatures, strengthening of dry winds and dusty storms. The local community has also noticed increasingly frequent jutes, early-spring frosts (ice cover on land that don't give sheep to eat under snow grass). Growth of climate aridity leads to degradation of pastures' vegetation and reduction of their efficiency. Since members of local community do not have other sources of subsistence besides farming, it is necessary to implement and develop livelihood practices that will be sustainable in the face of climate change. It is necessary because land degradation caused by anthropogenic factors during the last years has been aggravated by increases in climate aridity: decrease of average annual rainfall, rise in temperature, intensification of hot winds and dust storms. Cattle breeding, the traditional occupation in rural areas becomes risky and unprofitable due to lack of fodder, cattle underfeeding and attendant animal diseases. As a result, ecological, social and economical risks become higher.

One of ways to reduce risks, adapt local population to climate change and sustainable development of LC can become water and land resources management. The method which is offered in the project is carrying out of autumn-early-spring – water loading irrigation of the pastures of LC members located along the channel. This technology will allow increasing a stock of moisture in ground that will positively affect growth and quality of pastoral vegetation. Use of a part of these humidified pastures under fodder crops, undemanding to watering and steady to droughts will give an additional fodder crops reserve for cattle of LC members for the winter and early-spring period. Lucerne crops and the subsequent alternation of sites under it will allow restoring fertility of the degraded arable land. More waters will pass through the channel in autumn and early-spring periods, higher will be size of moisturized pastures.

The above-stated purposes will be reached by following project's results:

Outcome 1: Climate-resilient grazing practices implemented

Output 1.1: Reconstruction of Sharuashlyk canal

Output 1.2: Reconstruction of irrigation system (formerly used for agriculture, now being piloted for fodder crops)

Output 1.3: Selection and implementation of sowing pastures methods through growing alfalfa

Output 1.4: Climate-resilient irrigation techniques (autumn-early spring watering, and production of winter forage) under implementation in pilot sites.

Output 1.5: Using of climatic adopted methods of pasture management

Outcome 2: Community capacity to adapt to increasing aridity augmented

Output 2.1: Local awareness of long-term climate change impacts on local communities and livelihoods improved.

Output 2.2: Communities trained in autumn and early spring irrigated pasturage techniques and able to implement them

Outcome 3: Project results disseminated nationally

Output 3.1: Publishing of brochure based on project results.

Output 3.2: Demo workshop.

1.0 RATIONALE

1.1 Community/Ecosystem Context:

The village of Sady Shakirov is located in Talas area of Zhambyl region, nearby Talas river. The population of the village is 1462 people (266 households), including 547 children, 143 pensioners, 380 unemployed. The majority of the village population is engaged into cattle breeding and subsistence farming. During the Soviet times this village belonged to the state farm specialized in astrakhan (fur) farming; it had 113,017 ha, including 4019 ha of tillage, 2105 ha out of them – spray pasture, 1400 ha – hayfield, 70960 – pasture. However, today the village is in depressive economic state.

The territory of the project location is mostly occupied by desert landscape. Precipitation in this region is useful to local cattle ranchers only when there are at least more than 5 mm a day. In the project location, this occurs very rarely. For instance, in 2008 during summer-autumn period there were no precipitations for 168 days. Therefore, the basic stock of soil water consists of atmospheric precipitations that falls during the cold period (melted snow). If the amount of these precipitations decreases (as it is projected to do, and has been observed in recent years by the local meteorological service), stock of soil water also decreases.

During the last few years there has been a stable decrease of summer and winter precipitations in the region which led to a decrease of water-level of Talas River. Talas River is transboundary river which starts in Kyrgyzstan. As in Kyrgyzstan there are also big pastures of irrigated agriculture, the problem of water use has an international, political aspect. Due to the lack of the water in the river on the territory of Zhambyl oblast during summer time, there is a decrease in flush. "Sharyashlyk" canal is the main irrigative canal, constructed during Soviet times and used for the watering of few villages in Talas rayon. Irrigable lands of Sady Shakoriva members are located at the end of the canal and during the summer time they get water due to residual principal. As water level in the river has decreased, usually it is used for watering of other pastures before it reaches pasture of LC. This has led to unsustainable methods of irrigated agriculture, leading to salinization and other forms of degradation. Nowadays these degraded fields are used by local community members for unsystematic grazing which leads to further land degradation which have especially amplified recently because of climate change towards aridity.

Nowadays the main occupation of members of a local community is cattle breeding. Over-pasturing is observed on watered pasture; the degradation of these lands increases every year, due to increasing amount of cattle and worsening of climate conditions (such as decrease of precipitations, early spring and early autumn frosts; increase in summer temperatures, frequent drought and hot winds. These factors lead to deterioration of cattle conditions, high death rate of calves and the death of cattle because of underfeeding.

Due to the lack of water and aridity hay storage was stopped. The cost of imported hay is growing every year (300-400 tenge/15 kg), and poor population cannot afford it. On the land (2000 ha) of summer pasture from May to October 3250 heads of light horned cattle, 815 heads of cattle, 183 heads of horses and 31 heads of camels. There is a very high cattle load on pastures – 0,6 ha per 1 head while the norm – 3,5 ha per 1 head. Winter pasture is located 30-40 km from the village, in Mojinkum sands. These lands belong to Akkol local state institution for forest and fauna protection. This land is the property of Akkol Akimat and rent cost is 40 tenge per 1 ha. Due to financial reason poor residence are not able to use these pastures.

Shift of land irrigation to water loading irrigation method, that is period when there is no summer irrigation, will allow decreasing water deficiency. During decrease of winter precipitations (snow) during climate change, this method allows to make up lack of winter precipitations, increase the period of moisture accumulation, as frozen water melts with the same speed as snow. This will lead to estuary irrigation. On the other side, adoption of water loading method and expansion of the project experience around Talas River area in Kazakhstan as well as in Kyrgyzstan will decrease political tension, which caused by distribution of water resources and might intensify due to climate aridity.

Climate change towards aridity increases ecological risks. Main thesis of the project – sustainable development of the local community though introduction of new elements of water and land resources management, lowering risks caused by climate change.

The activities offered by the project regarding creation on degraded lands of a forage reserve for animal industries, will lower risks and will increase stability of local community during climate change. The projects solves not only the problem of global ecological interests, but also gives new possibilities to the members of local community who practice traditional cattle breeding in the age of climate change.

Climate changes, already reported by meteorological service based on the last 100 years observations, will have even stronger influence in the future. Climate changes affect balance of water resources, conditions of top-soil, quality and species composition of growth. Climate change and aridity will lead to worsening of pastures conditions (decrease of crop capacity, decrease of species composition, lost of feeding value, etc) Growth of the plants on the project territory is defined only by

atmospheric precipitates, as subsoil waters are deeper than 10-12 meters. Lack of water resources during summer time, will make irrigation agriculture impossible.

1.2 Climate Context:

Baseline climate/environmental indicators of the project location:

- Average minimum temperature in January is - 41°C.
- Average maximum temperature in July is + 45°C.
- Duration of frost-free period – minimum 116, maximum 245 days.
- Average rainfall 300 mm per year.
- Average number of days with atmospheric moisture capacity less than 30 % - 140 days.
- Dominant wind direction during atmospheric drought - north, north-eastern.
- Grey soils prevail.
- Sands take up 60 % of the territory.
- Flora - ephemeral, gramineous, absinthial.
- On average, precipitation is less than 200mm/year, and is distributed as follows:
 - 35% in the spring (March - April);
 - 50% in the winter and in the autumn (November – February)
 - 15% in the summer – up to 15 %.

Climate Change Projections for Southern Kazakhstan (Second national communication):

- Increasing of annual and seasonal air temperatures.
- Tendency for decreasing of precipitation level
- Increasing temperatures, especially in winter
- Decreasing of number of frozen days and increasing of a number of hot days
- Increasing ratio of rain to snow
- Increasing aridity and evaporation
- Recently observed trends (reported by communities):
 - Lower total annual precipitation
 - Increases in hot winds
 - Increases in dust storms

1.3 Impacts Context:

Agriculture.

The main problem for LC residents is the absence of irrigation water for conducting productive agriculture. Land salinization and other forms of degradation make agriculture unprofitable. Struggle with salinization involves its washing by big amount of water, but it is not possible because of sharp deficiency of irrigation water. Underground water contains salt and cannot be used for these purposes. The alternative way to decrease salinization and improve land fertility is to sow Lucerne crops, however, it requires water.

Cattle-breeding.

Increasing climate aridity and exceeding norms of pasturing resulted in decrease of quality and quantity of grass on these lands, and in lost of valuable fodder crops. Efficiency of cattle on such grounds is low, and in the long term animal industries become unprofitable. Animal underfeeding on pastures is reflected by the volumes and quality of cattle-breeding production, which in turn affects community members through lost income. For instance, during the last years, in Zhambyl region (project location territory) the average live weight of a cattle head (used for meat foods) was from 300 to 320 kg, and for sheep – from 33 to 39 kg. Potential weights for these types of farm animals are 400 and 50 respectively. Climate change has negative influence on land degradation and it will be getting worse unless the community changes management strategies.

The current year (2008) was very dry, and served as an example of local dependency on climatic conditions; it has shown that local community was not ready for the intense drought that was experienced. As it is impossible to stock up fodder and impossible to pasture cattle around village, local community has to decrease stock numbers. This puts cattle breeders in hard conditions and does not bring any profit.

1.4 Project approach:

Although, most part of the pastures in Zhambyl region has low agricultural quality, the region remains important agricultural sector. The project activities will include training, technical support to the LC of Sadu Shakirova, though introduction of new elements of water and land resources management, lowering risks caused by climate change. These activities will lower risks and will increase stability of

local community during climate change and will be focused on the following climate change-driven risks:

Climate change prognosis	Impact on community and ecosystem	Project activities aimed to reduce climate-driver changes
1. Decrease of annual precipitation and water level in Talas River	Absence of irrigation water, salinization and erosion risks, resulting in decrease of land fertility	- activities aimed to change water resources management; - methods, aimed to rehabilitated lands, increase growth, protecting soil and preserving its fertility
2. Increased risk of droughts and hot winds	Increase of evaporation, flora degradation and animal stress, increase of soil salinization and erosion, formation of moving sands. Fire risks.	Activities on autumn and early spring water loading irrigation will allow to preserve sufficient amount of moisture to grow Lucerne, reduce salinization risks and increase its fertility. One Lucerne hay-crop gives high quality winter crops which decreases load on pasture during winter and early spring period.
3. Increase of summer and winter temperatures	Decrease of favourable climate conditions for sustainable farming.	Activities on water loading irrigation will help to accumulate moisture in soil and make up moisture deficit during summer time.

The community will benefit from the use of more sustainable agricultural practices through introduction of more efficient water management, increase of pasture fertility and cattle productivity, and this will decrease community vulnerability to climate changes. Besides, more sustainable agricultural practices can grow Lucerne crops and have high quality winter fodder. The best practices will be identified in order to replicate them in the nearest villages, in rayon and Zhambyl region.

2.0 COMMUNITY OWNERSHIP

2.1 Project Formulation:

Project objectives aim to increase public support and improve natural resources, especially water resources, management. Studies and discussions conducted by PA “Kogal” covered such issues as pastures preservation and efficient use of water resources. In the preliminary stage of the project, community members took part in the workshop and learnt about climate change driven risks, about importance of canal rehabilitation and increase of water level soil. They also got familiar with the method of efficient water use for irrigation through introduction of water loading irrigation during autumn and early spring periods when water is not used to water agriculture crops. During the planning stage community members were involved in the discussion of project activities and participated in VRA.

2.2 Project Implementation:

Community project related meeting will take place regularly (quarterly) to monitor implementation of project activities, completed tasks and managed challenges. These meeting will guarantee not only consistency in implementation of project activities during the timeframe but also after its completion. They also will guarantee transparency and increase of social consciousness of LC member.

2.3 Phased-Out Mechanism, Sustainability:

Recovering of channel and constant control of its working conditions by the force of local community with usage of autumn-early spring watering methods will help local community members to use additional land resources and have additional social-economical benefits. This will guarantee livelihood development and will increase their interest in usage of new methods in future. NGO Kogal will be leading and regulate the process of further channel exploitation and will be involving local community members. The future exploitation cost will not be high and will be possible to be covered by local community.

It need to be noted that one outcome is directly oriented on creation of capacity for project sustainability trough capacity building of local community members

PA “Kogal” will search for resources to extend the activities started in the framework of this project. One of the aims of the this project is to create the potential of the community member and support

more sustainable method of efficient use of water resources, rehabilitation of degraded lands and preservation of winter fodder for cattle.

3.0 PROPONENT DESCRIPTION

3.1 Organization`s background and capacity:

PA “Kogal” is a non-profit organization which has been registered as Public Association “Kogal” in 2005. The aim of the association is to solve the problems of the village with the united efforts. Results of the association work: involvement of village residents in streets cleaning; explanatory work with cattle owners regarding muck cleaning. Decision was taken to unite forces to solve ecological problems of the village, particularly, to renew degraded lands.

In 2006 PA conducted project “Participation of local community in the activities aimed to preserve pastures and prevent land degradation through sowing feed crops and developing forest shelter belts”.

PA “Kogal” has 7 households and 1 LPA. In total it has 13 people. Among its members there are agronomist, veterinary surgeon, mechanization expert and shepherds.

During the meeting which was attended by 64 people, represented by PA “Kogal”, 7 farms, and members of 20 families, it was decided to develop project proposal. Aims, objectives and activities of the project have been discussed. Osranbekov Anuarbek, veterinary surgeon with 30 years of working experience, was elected as project executor and project manager.

Community of the village has positively appraised the concept of the project and agreed with the project activities. It has defined canal renewal works, lands for autumn and winter watering.

Village community and its leader Osranbekov Anuarbek have shown initiative in the development of this project. During the project preparation stage the following activities were conducted: preliminary work has been conducted in the village, the support of village akim was granted, necessary information has been collected for the project proposal.

4.0 PROJECT DESCRIPTION

4.1 Objective, Outcome, output, activities:

Outcome 1: Climate-resilient grazing practices implemented

- Output 1.1: Reconstruction of Sharuashlyk canal
- Output 1.2: Reconstruction of irrigation system (formerly used for agriculture, now being piloted for fodder crops)
- Output 1.3: Selection and implementation of sowing pastures methods through growing alfalfa
- Output 1.4: Climate-resilient irrigation techniques (autumn-early spring watering, and production of winter forage) under implementation in pilot sites.
- Output 1.5: Using of climatic adopted methods of pasture management

Outcome 2: Community capacity to adapt to increasing aridity augmented

- Output 2.1: Local awareness of long-term climate change impacts on local communities and livelihoods improved.
- Output 2.2: Communities trained in autumn and early spring irrigated pasturage techniques and able to implement them

Outcome 3: Project results disseminated nationally

- Output 3.1: Publishing of brochure based on project results
- Output 3.2: Demo workshop

4.2 Schedule:

	m	j	j	a	s	o	n	d	j	f	m	a	m	j	j	a	s	o	n	d	j	f	m	a
Outcome 1																								
Output 1.1																								
Output 1.2																								
Output 1.3.																								
Output 1.4																								
Output 1.5																								
Outcome 2																								
Output 2.1																								
Output 2.2																								

<p>is lowering; no water in the well.</p> <p>3. Salinization of well water.</p> <p>4. Small number of gardens.</p> <p>5. Affects the grass cover and pastoral productivity.</p>	<p>0 8, 7, 9, 10, 10, 8, 7, 9, 8, 9 10</p>	
	<p>How could the rating be improved?</p> <p>1. To repair the channel and flood-gates.</p> <p>2. To change the irrigation mode for 1.03-1.05 and 1.09-1.12.</p> <p>3. To sign the water allotment agreement with Baizak District Water Management Department.</p>	

<p>Reasons of positive answer</p>	<p>2. Which methods are used to combat the growing aridity? How efficient are they for maintaining your livelihoods in non-productive years?</p>	<p>Reasons of negative answer</p>
<p>1. The lack of winter pastures.</p> <p>2. The area of gardens has diminished.</p> <p>3. Loss of animal weight.</p> <p>4. The lack of own winter fodder.</p>	<p>1,0</p> <p>0 1, 1, 1, 1, 2, 1, 1, 0, 1, 1 10</p>	<p>N/a.</p>
	<p>How could the rating be improved?</p> <p>1. To supply the irrigation water.</p>	

<p>Reasons of positive answer</p>	<p>3. Where low-water years (2008) become normal, how serious will be the impact on your livelihood?</p>	<p>Reasons of negative answer</p>
<p>1. Health impairment.</p> <p>2. Animal diseases, stock mortality.</p> <p>3. Reduction of pasture productivity.</p> <p>4. Pasture degradation.</p>	<p>8,8</p> <p>0 9, 8, 9, 10, 8, 9, 9, 8, 10, 8 10</p>	<p>N/a.</p>
	<p>How could the rating be improved?</p> <p>1. To repair the channel.</p> <p>2. To cultivate forage crops.</p>	

<p>Reasons of positive answer</p>	<p>4. How capable is the local community of addressing the climate change problem in order to conserve your well-being?</p>	<p>Reasons of negative answer</p>
<p>1. LC members lack material and technical resources.</p>	<p>2,9</p> <p>0 3, 4, 2, 5, 4, 2, 1, 2, 3, 3 10</p>	<p>1. A transition to cattle farming.</p>
	<p>How could the rating be improved?</p> <p>1. To repair the channel</p> <p>2. To build an initiative group.</p> <p>3. To join the efforts for tackling the problem.</p>	

<p>Reasons of positive answer</p>	<p>5. What are the barriers to using autumn and winter irrigation? How serious are they?</p>	<p>Reasons of negative answer</p>
<p>1. Destruction of channel walls.</p>	<p>8,7</p> <p>0 8, 10, 10, 8, 7, 8, 8, 9, 9, 10 10</p>	<p>N/a.</p>

2. Insufficient water allotment to the channel. 3. Destructed flood-gates. 4. Loss of water. 5. The lack of equipment. 6. No agreement with the water users.	How could the rating be improved? 1. To repair the channel. 2. To make an agreement with water users.	
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Reasons of positive answer	6. Will the community be able to follow up with the autumn and winter irrigation and farming after the project?	Reasons of negative answer
1. Initial assistance is vitally important. 2. Further activities will be independently done. 3. The outcomes will serve an incentive. 4. LC members are willing to invest their resources.	9,5 0 8, 10, 10, 10, 9, 9, 10, 10, 10, 9 10	N/a.
	How could the rating be improved? 1. Each participant is willing to be involved in the project activities and use his/her best efforts (labor input, machinery etc.)	

Reasons of positive answer	7. Will the LC be able to progress in reducing their vulnerability to the climate change after implementing the new irrigation practices?	Reasons of negative answer
1. Irrigation water will be available. 2. Lucerne and other forage crops will be produced 3. Winter fodder will be available.	9,3 0 8, 10, 9, 9, 10, 9, 10, 9, 9, 10 10	N/a.
	How could the rating be improved? 1. The arrangements are needed to transfer the channel to the balance of the District Water Management Department. 2. To raise public awareness of the climate change and reduce the risks by autumn and spring irrigation.	

According to the new Vulnerability Reduction Assessment Provisions (VRA), below are the four questions that have been discussed by LC members and H-Form.

1. How serious is the current impact of climate change causing the reduction of water level in the Talas River on your livelihood?
2. Where low-water years (2008) become normal, how serious will be the impact on your livelihood based on the existing farming practices?
3. How serious are the barriers to using the new moisture accumulation method (autumn and early spring irrigation)?
4. How confident is the community about the reduction of vulnerability to the climate change risks by applying the autumn and early spring irrigation?

**INITIAL VULNERABILITY REDUCTION ASSESSMENT (VRA) H-FORM
FOR THE PROJECT "AUTUMN IRRIGATION"**

<i>Reasons of positive answer</i>	1. How serious is the current impact of climate change causing the reduction of water level in the Talas River on your livelihood?	<i>Reasons of negative answer</i>
1. Water level is low; the lack of water for irrigation. 2. The ground water level	4,25 0 4; 3,5; 4,5; 5; 5; 4; 3,5; 4,5; 4; 4,5 5	N/a.

is lowering; no water in the well. 3. Small number of gardens. 4. Affects the grass cover and pastoral productivity.	How could the rating be improved? 1 To repair the channel and flood-gates. 2. To change the irrigation mode for 1.03-1.05 and 1.09-1.12. 3. To sign the water allotment agreement with Baizak District Water Management Department.	
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<i>Reasons of positive answer</i>	2. Where low-water years (2008) become normal, how serious will be the impact on your livelihood based on the existing farming practices?	<i>Reasons of negative answer</i>
1 Health impairment. 2. Animal diseases, stock mortality. 3. Pasture degradation.	4,4 0 4,5; 4; 4,5; 5; 4; 4,5; 4,5; 4; 5; 4 5 How could the rating be improved? 1. To repair the channel. 2. To cultivate forage crops.	N/a.

<i>Reasons of positive answer</i>	3. How serious are the barriers to using the new moisture accumulation method (autumn and early spring irrigation)?	<i>Reasons of negative answer</i>
1. Destruction of channel walls and flood-gates. 2. Lack of finance. 3. Loss of water. 4. The lack of equipment. 5. No agreement with the water users	4,35 0 4; 5; 5; 4; 3,5; 4; 4; 4,5; 4,5; 5 5 How could the rating be improved? 1. To repair the channel. 2. To make an agreement with water users	N/a.

<i>Reasons of positive answer</i>	4. How confident is the local community in reducing its vulnerability to the climate change by applying the autumn and early spring irrigation?	<i>Reasons of negative answer</i>
1. Initial assistance is vitally important. 2. Further activities will be independently done. 3. The outcomes will serve an incentive.	1.5 0 2; 1; 0; 1; 1; 1; 0; 1; 0; 2 5 How could the rating be improved? 1. Each participant is willing to be involved in the project activities and use his/her best efforts (labor input, machinery etc.)	1. There are some uncertainty about capabilities

Below are the rates of Vulnerability Reduction Assessment (VRA):

Reporting VRA Form

Indicator 1	4,25
Indicator 2	4,4
Indicator 3	4,35
Indicator 4	1.5
VRA Assessment	3.62

GLOBAL ENVIRONMENTAL BENEFITS (GEB)

GEB will be measured by the amount of lands involved in sustainable land tenure during the project implementation and introduction of local community sustainable development methodology.

Land Degradation

1. Number of ha of degraded lands restored within the project. 30 ha of degraded lands will be restored by planting lucerne in year 1 and another 30 ha – in year 2.
2. Number of ha where sustainable and management practice introduced. 250 ha will be sustainably managed after the project (the work with 7 farms).
3. The total cost of goods generated with the project (in USD). This indicator will be measured annually and compared to the baseline data of 2008.
4. Number of developed/introduced innovations or methodologies. The project will use 2 technologies (moisture accumulation irrigation, forage crops cultivation).
5. Number of local normative acts on which projects influenced. The two instruments (Water Allotment Agreement with the District Water Management Department and the Deed of Channel Transfer to the Balance of District water Management Department) will be developed for the project site.

Livelihood indicators

1. Number of households benefited from project. 7 households will benefit from the project.
2. Number of individuals benefited from project. 64 persons will benefit from the project.

Empowerment indicators

1. Number of NGO/LCs involved in project implementation. One NGO, one LLP and 6 farms will be involved in the project.
2. Number of women involved in project implementation. 25 women will be involved in the project.

The Impact Assessment System (IAS) will be used to measure the final results of the project, using the following indicators:

- Amount of degraded lands renewed during the project framework
- Number of developed/implemented innovations or new technologies during the project activities.
- Total amount of rules influence degraded lands.

The above mentioned have the following aims:

- (1) 250 ha will be under sustainable management as result of the project (work with 7 farmers households).
- (2) Two technologies will be implemented in the project (water loading irrigation, growth of fodder crops).
- (3) Two rules (Agreement with local authorities on water flush and Act to hand over the canal to local authorities use) will be adopted on the project location territory.
- (4) 30 ha of degraded lands will be rehabilitated by sowing Lucerne seeds during first year and 30 ha during the second year.

ADAPTIVE INDICATORS OF UNDP:

The project will be evaluated based on the following indicators of CBA Country program strategy:

- Number of measures (implemented methodologies/ approaches) deployed as part of climate change resilient sustainable resource management activities; 2 methods
- Number of stakeholders (e.g. families/households) benefiting from climate change resilient sustainable resource management activities; 12 families will benefit from project realization during its first year, and more families will get involved in future.
- Number of local and national SLM programs/policies that are revised to reflect lessons learnt/ best practices from the CBA program. 2 docs on sustainable land management will be developed.

Sady Shakirova Village

During the first meeting in the village which took place in August 2008, there were 64 people: farmers, members of farming households and akimat employees. The majority of participant were 40-60 years

old. Workshop participants listened to a short introduction presentation on climate change. During the second workshop which took place on 3rd of December before VRA related questions were discussed, there was a discussion on community land condition, village problems, water supply problems and further development of the village. The questions of vulnerability reduction caused by climate change were discussed in details. The results are available above and also in Project's Annex. The next stage was analysis of the projects objectives, aims and results. All participants had a chance to answer question and comment on any issue raised during the meeting.

4.5 Project management:

4.5.1 Management structures:

Mister Osranbekov Anuarbek – Director of PA “Kogal” was responsible for the implementation of project activities. Mr. Osranbekov has a higher education, in 1989 he graduated from Kazakh agriculture university, with specialization in veterinary. Mr. Osranbekov has working experience in agriculture, and has been working in Sadu Shakirova for more than 20 years. He is familiar with the problem of land degradation, and knows the members of the village. Thus, his candidature is suitable for this position and can manage project implementation. (CV is attached).

Mr. Osranbekov has established working relations with rayon departments on water-resources and ecology. Besides, he has organized seminars on VRA and managed planning activities with LC members during planning phase of the project. Village akim showed support to the project and will help Mr. Osranbekov. Mr. Osranbekov will report every three months to the GEF/SGP Coordinator m, in order to monitor and assess the project on the regular basis.

4.5.2 Relations and responsibilities of proponent and project partners:

Mr. Osranbekov will work in close cooperation with the LC members, especially with the managers of 7 households and Limited Partnership Association. He will maintain contacts with representatives from other organizations for technical and other support. The meeting with authorities will be conducted to get their support for sustainable water supply in autumn and spring periods. The experts will also be involved in the project activities.

PA “Kogal” will provide project management with people. CBA financial support will be directed to climate management related project activity.



5.0 PROJECT COST AND OTHER SOURCES OF FUNDING

5.1. Total Project Cost and Amount Requested:

Total project cost: US\$71,645

Amount requested: US\$41,140

(Note: the grant of US\$2,000 was allocated to the planning grant)

Kogal contribution: US\$ 30,505

	Item	CBA Input, \$			Proponent's Input, \$		Other partners' input, \$		Total Amount, \$
	(Description)								
		2009	2010	2011	In-cash	In-kind	In-cash	In-kind	
	Outcome 1: Climate-resilient grazing practices implemented								
	Output 1.1: Reconstruction of Sharuashlyk canal (CBA input– 71%, co-financing – 39%)								
Activity 1.1.1	Purchasing of drain pipes (10 items.)	24890			9700				34590
Activity 1.1.2	Purchasing of beton plates (40 items.)	500							500
Activity 1.1.3	Dredge rent (100\$, 40 days)	3500							3500
Activity 1.1.4	Buldozer rent (100\$, 40 days)	4000							4000
Activity 1.1.5	Cement (20 tonnes,) - 1400\$ (fuel for transportation of materials, workers, seeds. 120 km x 25 l/km x 0.36\$ /l)	4000							4000
Activity 1.1.6	Truck transport rent (150\$ x 54 days)	2500							2500
Activity 1.1.7	Iron squares 63 pieces, squares 50 (7 pieces); squares 45 – 9 pieces; squares 40 – 8 pieces; armature 12 – 100 pieces; iron sheets, 2 – 4 pieces; iron sheets, 1 – 6 pieces; rubble (20 tons)	8100							8100
Activity 1.1.8	Acquisition of beton plates	2290							2290
Activity 1.1.9	LC contribution to rehabilitation of the channel: labor (6				3500				3500

	people. x 16,4\$ x 48 days; technics 210\$ x 7 days)							
	Output 1.2: Reconstruction of irrigation system (formerly used for agriculture, now being piloted for fodder crops) (CBA contribution – 33%, co-financing – 67%)				6200			6200
Activity 1.2.1	Carrying out of watering furrows: consultations of expert on melioration, scheme working out (CBA – 36 %).		1000					1000
Activity 1.2.2	Carrying out of watering furrows:: 12 people x 25\$.x 10 days (co-financing – 67%)				2000			2000
	Output 1.3: Selection and implementation of sowing pastures methods through growing alfalfa (CBA – 13%, co-financing – 87%)		1875		12175			14050
Activity 1.3.1	Lucerne seeds 60 hectares, x 20 kg x 3.12\$ /kg (CBA – 50%, co-financing– 50%)		1875		1875			3750
Activity 1.3.2	Coordination and regulation of water supply norms				300			300
Activity 1.3.3	Preparation of soil and lucerne crops (technics, ploughing, PETROLEUM PRODUCTS, layout) 167\$/hectares x 60 hectares				10000			10000
	Output 1.4: Climate-resilient irrigation techniques (autumn-early spring watering, and production of winter forage) under implementation in pilot sites (co-financing)				600		300	900

Activity . 1.4.1	Field trainingsb				600			600
Activity . 1.4.2	Development of autumn watering technics by locoal inhabitants						300	300
	Output 1.5: Using of climatic adopted methods of pasture management (co-financing)				1400		500	1900
Activity . 1.5.1	Definition of environmental norms for watering and Lucerne growing in terms of climate change forecast				300			300
Activity . 1.5.2	LC members graze the cattle as per the recommended method						500	500
Activity . 1.5.3	Hay preparation (mowing, raking up, transportation) - technicas, fuel 630\$ - labor: 47\$ x 10 days				1100			1100
	Outcome 2: Community capacity to adapt to increasing aridity augmented							
	Output 2.1: Local awareness of long-term climate change impacts on local communities and livelihoods improved (co-financing)				600			600
Activity . 2.1.1	Meetings, leaflets publication, field days, discussion of OCY				300			300
Activity 2.1.2	Articles publication in mass-media				300			300
	Output 2.2: Communities trained in autumn and early spring irrigated pasturage techniques and able to implement them				600			600

Activity . 2.2.1	Training of the LC members in autumn and spring watering				600				600
	Outcome 3: Project results disseminated nationally								
	Output 3.1: Publishing of brochure based on project results (CBA)		800						800
Activity 3.1.1	Information gathering and development of brochure in Russ and KAZ		300						300
Activity . 3.1.2	Publication of brochure, 500 examples, A5 format, coloured		500						500
	Output 3.2: Demo workshop		700						700
Activity . 3.2.1	Demonstration seminar		625						625
Activity . 3.2.2	Transportation, accommodation and food for 30 participants		75						75
	Project management activity Leading expert 140*24 months Coordinator 120*24 months Accountant-100*24months.	3240	4320	1080	2160				10800
	Monitoring & evaluation			900					900
	Transportation of experts	350	200	50					600
	Experts food and accommodation	300	300	0					600
	Communication costs (co-financing 19%)	140	130	30	70				370
	Bank commissions	100	80	20					200
	Fax	250							250
	Contingencies	285	100	0	400				785
Total		29555	9505	2080	29705	0	800	0	71645