

**FINAL GRANTEE PROJECT EVALUATION/SITE VISITREPORT
CBA PILOT PROJECT-PIMS 3508**

Introduction

The CBA programme is supporting the implementation of between 8 and 20 community-based adaptation projects, designed to enhance the adaptive capacity to climate change of participating communities, in each of ten countries (Bangladesh, Bolivia, Guatemala, Jamaica, Kazakhstan, Morocco, Namibia, Niger, Samoa, and Vietnam). In order to ensure cost-effectiveness, projects are implemented in areas that are particularly vulnerable to climate change including variability, and where there is high potential to secure global environmental benefits in the context of climate change. Projects like this one under review, emerges from each of the focal areas [biodiversity, land degradation, coastal zone management, etc] depending on local context, specific vulnerability and adaptation analysis in each of the selected sites within the countries. To achieve the objective of this project and in line with the overall CBA programme, all activities discussed during evaluation should provide clear inputs to the three overall outcomes at the global levels. These are:

- (i) Enhanced adaptive capacity allows communities to reduce their vulnerability to adverse impacts of future climate hazards
- (ii) National policies and programmes designed to include community adaptation priorities to promote replication, up-scaling and mainstreaming of best practices
- (iii) Cooperation among member countries promoted for innovation in the design and implementation of adaptation to climate change including variability projects and policies.

SECTION A: Project Details

1.0 Name of Project: Planting of forest protection belts to combat dry hot winds and retain snow and moisture as an effective method of the climate change risks reduction

2.0 Project Number: CBA/KAZ/SPA/09/04

3.0 Project Start Date: April 2009

Project End/Termination Date: September 2011

4.0.No. of Project Extensions If Any: The project had one extension, from 1 May to 30 September. The project was extended by the reason of refining the final project reports.

SECTION B: ORIGINAL PROJECT INFORMATION:

5.0. Project Goal, objectives, expected outputs and sustainability plans:

The main project goal was to reduce the land degradation risks connected with climate change risks including the rise of summer temperature, dry hot winds and the loss of winter precipitation.

A number of key goals have been identified within the project:

Outcome 1: Forest belts established to mitigate the climate risks connected with the reduction of winter snowfalls, and to retain the soil moisture and more humid microclimate.

Outcome 2: Pasture overgrazing reduced through implementation of remote summer grazing.

Outcome 3: Ground water for irrigation rationally managed

Outcome 4: The local community is able to take into account the climate risks in the land and water resources management.

Expected Outcomes:

1. The forest protection belt was established on the area of 20ha: over 10 thousand fruit seedlings have been planted
2. A deep-seated well was drilled; the tanks to collect the irrigation water and water pump were installed
3. The drip irrigation system was established on the area of 20ha
4. 2-3 times saving of the irrigation water and 4 times saving of water consumption costs
5. High survival ability of seedlings – over 90% owing to the drip irrigation
6. 3 times increase in the yield of lucerne hay
7. Development of basic infrastructure in the area of 179ha of remote summer pastures in the mountains and arrangement of annual seasonal grazing of dry cows owned by the local community members of Shyrkyn village
8. High yields of agricultural crops grown in the inter-row spacing of the forest belts and improvement of livelihoods of the LC members
9. Low-income families of the local community were supplied on a free of charge basis the agricultural products grown by the project
10. Reduction of the grazing load on the area of 250 ha of degraded near-village pastures, restoration of soil and vegetation by implementing the seasonal pasture rotation technology
11. Over 200 ha of plough-lands are used in agreement with the principles of sustainable water and land utilization
12. 16% i. e. 560ha of the project territory (4 farms and 2 production cooperatives) are under climate-resistant agricultural activities implemented by the local community members
13. 53 households of Shyrkyn village have benefited from the project activities
14. 11 workshops and round tables have been organized to inform the government authorities and train the local community members of Shyrkyn village and inhabitants of the neighboring settlements in the methods of sustainable land and water resources management and dissemination of the experiences gained
15. The brochure has been published containing the main approaches to the adaptation land use methods implemented under the growing climate aridity conditions
16. The experience sharing visit was organized for CBA project Akbota in the field of water-saving irrigation technologies
17. The training has been organized dedicated to the climate change impact on the local inhabitants and the opportunities to reduce the vulnerability of the local community by implementing the method of forest belt development, growing agricultural crops under the forest belt protection and the use of drip irrigation as the water saving technique.

Sustainability Mechanism. It was initially planned that sustainability of projects results will be achieved based on real needs of local community in forests belts. The forest belts will create more comfortable microclimate for planting in the space between belts different types of vegetables, forage and crops. In some years the local community will have benefit from fruits selling. Due to this interest the local community will protect and watering trees by their own forced without external support or financing.

SECTION C: METHODOLOGY (*Describe the innovative methods/systems/strategies used in the project and a listing of name of participants/organisations in this process*):

The project has implemented a few innovation technologies.

The establishment of forest protection belts (based on multi-row principle) covering the area of 20ha composed of the cultivated fruit trees (apricot, apple, walnut, plum, pear etc.). Essentially the approach is innovative. On one hand, it enables the LC members to make the additional income from harvesting and sale of fruits. On the other hand, the forest belts planted transversal to the predominant wind will mitigate the impact of dry hot winds, increase snow retention, preserve moisture in soil and prevent the wind erosion of soil.

The plantation of winter wheat, lucerne and melons in the row spacing of the forest belts enabled to provide the additional income to the LC just in the first years of the project. Within 2 years of the project implementation the members of the local community has got a tangible aid.

The drip irrigation system to irrigate the forest plantations and the crops planted in the row spacing enabled to provide moisture regardless of the level of summer precipitation and save water which deficit is all pervasive and will increase as the climate aridity grows.

The drip irrigation system used to irrigate the forest plantations and the crops planted in the row spacing enabled as follows:

- ✓ To prevent soil salinization
- ✓ To save the irrigation water 2-3 times being a high saving factor given the existing heavy deficit of water
- ✓ To increase 3 times the yield of hay; given the existing deficiency and high process of winter forage, this is a tangible improvement in the livelihoods of the LC members
- ✓ To reduce considerably water expenses
- ✓ In addition, with the drip irrigation system where water is supplied to each seedling the survival rate was 96-97% being much higher compared to the furrow irrigation system.

Implementation of the system of sustainable pastoral management. The other problem faced by Shyrkyn village was the absence of seasonal grazing system resulting in the degradation of the near-village pastures. To prevent the degradation of the village pastures the project has developed the distant grazing system and, starting from 2009, the non-milked part of cattle maintained by the local community has been grazed every year at the distant summer pastures. The method enabled to considerably

- ✓ Reduce the pressure on the pastures around the village;
- ✓ Raise the cattle productivity.

4.0 The table

Objectives	Findings on Activities and strategies Implemented	Lessons learned and Challenges Encountered	Tools and Products developed
<p>M+E performed previously.</p> <p>The monitoring of project activities and the vulnerability reduction assessment (VRA) have been conducted on the dates as follows:</p> <p>03.03.2009 – VRA-1 and monitoring</p> <p>14.04.2010 – project monitoring</p> <p>27.05.2010 – VRA-2 and project monitoring</p> <p>08.04.2011 – VRA-3 and project monitoring</p>	<p>The project monitoring was conducted during 2 years of the project (2009-2011). The monitoring results are presented below:</p> <ul style="list-style-type: none"> - 25 March 2009 11571 seedlings of fruit trees (apple, pear, plum, walnut, pistachio) were planted on the area of 20,5ha to develop the forest protection belt; - A deep-seated well (7,5m) was drilled; 2 tanks (5 and 7 tons) were installed to collect the irrigation water and one water pump was installed; - The drip irrigation system was installed on the area of 20ha; - The drip irrigation system ensured a 3-times saving of the irrigation water and a 4-times saving of water consumption costs; - High survival ability of seedlings - 96%-97% - reached and a 3-times increase in the yield of lucerne hay owing to the drip irrigation applied; - The basic infrastructure in the area of 179ha of remote summer pastures developed (housing, wells and drinking bowls repaired, solar generator installed) and the annual seasonal grazing established for the dry cows (up to 500 conventional heads) maintained by the local community members; 	<p>Through the grant support of CBA Program and the Swiss Government the local community of Shyrkyn village were able to successfully implement the project activities and demonstrate the efficient methods of adaptation to the climate changes.</p> <p>The project activities enabled to resolve a number of issues: the problem of irrigation water, payment for irrigation water, supply and payment for electricity, arrangement of seasonal grazing etc.</p> <p>The challenges encountered in the process of project implementation were with the drip irrigation equipment suppliers, delays in equipment supplies, assembly and commissioning of the drip irrigation system.</p> <p>The further uninterrupted operation of the drip irrigation system was ensured through training of the local community</p>	<p>Various methods of information sharing have been used for the purposes of public awareness.</p> <p>The project organized 11 workshops and round tables to train the local community members and people living in the neighboring villages in the methods of sustainable land and water resources management implemented by the project;</p> <ul style="list-style-type: none"> - The booklet «Forest Protection Belts» was published dedicated to the project of the Community-Based Adaptation Program (CBA); - The brochure of the climate change adaptation methods used and project achievements under the growing climate aridity conditions was published; - The project manager several times presented the project-related information at the meetings of district and oblast akimats, UNDP workshops dedicated to the climate change adaptation, by radio and on TV; - The project-related information was published in the district basis on a regular basis.

	<ul style="list-style-type: none"> - Within the two years of the project 25 tons of lucerne hay grown in the row spacing were collected, 17 tons of wheat and 12 tons of melons thus; the livelihood of the local community members was enhanced; - The following products were supplied on a free of charge basis to the low-income families of the local community: wheat – 7 tons, chaff – 30 tons; lucerne hay – 15 tons (2009); wheat – 10 tons, chaff – 40 tons; lucerne hay – 10 tons, melons – 5 tons (2010); - As a result of the project activities the load on the degraded near-village pastures has been reduced; the soil and vegetation are being recovered; - The project enabled the sustainable management of 229 ha of plough-land; - It follows from the project outcomes that the drip irrigation technology is the best way to adapt the irrigated land farming to the growing climate aridity; - 769 ha of the project area are under the climate-resistant activities (20ha – forest protection belts; 179ha – distant pastures; 361ha – near-village pastures; 209ha – plough-land) performed by 4 farms and 2 production cooperatives; - 53 households of Shyrkyn village have benefited from the project activities; - In June 2010 the project activities have 	<p>members in relation to the system operation, its conservation for the winter period and commissioning for the spring and summer season.</p> <p>The project challenges were also in connection with:</p> <ul style="list-style-type: none"> - The lack of special equipment; - The obsolete agricultural machinery; - The price appreciation of the materials (lubricants, fertilizers, seeds, planting material etc.). <p>To address the above problems the project executing parties purchased at the own cost 2 manual mowing machines with gasoline engine for the purpose of haymaking in the hard-to-reach places (for tractor-drawn haymower).</p> <p>In future the specialized equipment will be purchased using their future profit, specifically, the spray for pest and weed control purposes.</p>	
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	<p>been expanded sponsored by the Swiss Government's grant: the drip irrigation system was installed on the entire territory of forest protection belts. The experience sharing visit was organized for CBA project Akbota in the field of water-saving irrigation technologies;</p> <ul style="list-style-type: none"> - The recommendations have been developed for the use of drip irrigation system for fruit seedlings and grapes; - The methods of growing melons (water-melons, pumpkin, muskmelon) and vegetable crops (cucumbers) in the row spacing of the forest belts using the drip irrigation system have been developed; -The technologies implemented by the project developed a unified complex of the land and water resources utilization in the local community of Shyrkyn village; - The questionnaire survey of the project participants has shown a high efficiency of the adaptation methods applied by the project; - The project participants have demonstrated the complete unanimity in their willingness, capabilities and capacities to follow up the project activities at the end of donor financing. - The monitoring of project activities, interviews with the village inhabitants and the vulnerability reduction assessments 		
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	<p>have shown that the adaptation methods implemented and the project outcomes attained have reduced the dependence of the village inhabitants on the intensified climate aridity on the project site.</p> <p>The method implemented by the local community members was enlisted in the list of the best practices to reduce the vulnerability of rural inhabitants to the climate change risks of the Kazakhstan National Climate Change Adaptation Concept</p>		
<p>Training and Capacity building of grantees and communities</p>	<p>The grantees actively performed training for the local community members and inhabitants of the neighboring villages dedicated to establishment of forest protection belts composed of fruit trees. The meetings have been organized for various target groups as follows:</p> <ul style="list-style-type: none"> - Representatives of executive authorities; - Oblast NGO's; - Farmers, agricultural producers of the district and oblast; - Inhabitants of Shyrkyn village; - Schoolchildren; - Representatives of district and rural akimats. 	<p>Each meeting had the main goal – to ensure maximal coverage of the inhabitants of Sairam district for the purposes of broad public awareness of the ongoing climate changes on the project site, the methods of adaptation of the rural inhabitants to the climate change risks and demonstration of specific methods implemented by the project and raising the adaptation capacities of the local community members.</p> <p>The training participants, not only the inhabitants of the neighboring villages but also the neighboring districts, proposed a number of ideas and are willing to develop</p>	<p>The round tables (15.10.2009; 25.11.2009; 27.01.2010 etc.) were organized for the representatives of oblast and district executive authorities, farms operating in the oblast and oblast NGO's (the lists are attached hereto). The capacity development of the local inhabitants and expansion of involvement in the climate change adaptation activities were encouraged by the Field Days organized on the project site, demonstration of economic efficiency of the methods implemented by the project, publishing and dissemination of the booklets, brochure and presentations of the project grantees in mass media.</p>

		the projects on the new approaches to adaptation of the local communities to the climate change risks	
Community mobilization	<p>The project was implemented with the support of the local inhabitants of Shyrkyn village.</p> <p>At the initial stage the project involved 124 women, 139 men, 210 schoolchildren.</p> <p>In the course of the project the capacities were enhancing and the community mobilization has also improved. The number of participants involved in the project was: 186 women, 223 men, 269 schoolchildren.</p> <p>The volunteer movement was organized in the village. People voluntarily worked at the reestablished forest protection belt.</p>	<p>The project outcomes demonstrated to the local inhabitants that in the conditions of growing climate aridity the profit can be made and the wellbeing can be improved by implementing the adaptation methods.</p> <p>Difficulties: the young seedlings and plants seeded in the row spacing need to be protected from destruction by animals. The problem is addressed by the volunteer work of the village inhabitants involving women, retired persons and schoolchildren. The local community members will use their expected profit to enclose the forest belts.</p>	<p>The tools are described below:</p> <ul style="list-style-type: none"> - The general meetings of the village inhabitants; - Organization of training courses and training in the drip irrigation method; - Organization of Field Days, training in the proper maintenance of seedlings, proper irrigation etc.; - Involvement of schoolchildren in the project activities; - Expansion of the volunteer movement in the rural settlements and involvement of volunteers to the project activities: seedlings maintenance, forest belt protection, harvesting etc.; -Publishing articles in the district newspaper.
How project promoted or impacted policy	<p>The main problem of the project site is the growing aridity and as a consequence intensification of dry hot winds, reduction of water supply to the agricultural sector, the loss of moisture in soil, reduction of productivity of irrigated lands.</p> <p>The project strategy is water saving under</p>	<p>Forest protection belt used to reduce the impact of dry hot winds is a well-known method. The innovation approaches used by the project when establishing the forest belts were: development of multi-row plantations of fruit trees</p>	<p>The grantees were actively working to raise the public awareness of the climate change risks and train the local community members of Shyrkyn village and the nearby villages to develop the forest protection belts and implement the drip irrigation system. The meetings</p>

	<p>the growing climate aridity conditions. Th project activities were focused on the implementation of the methods of sustainable water and land resources management: revival of forest belts, reduction of water and wind erosion and application of drip irrigation. Such approach encouraged the improvement of the adaptation capacities of the local inhabitants to the climate change.</p>	<p>and drip irrigation. The advantages of forest belts composed of fruit trees (apples, pears, plums, walnuts) with the spacing sufficient to use the agricultural machinery are: improvement of snow retention; microclimate is developed in the row spacing favorable for growing the agricultural crops; in the following years harvesting and sale of fruits will bring the additional income to the local community members. The advantages of drip irrigation:</p> <ul style="list-style-type: none"> - Saving of irrigation water; - Prevention of water erosion and soil salinity; - Saving the cost of irrigation; - Better yields. <p>Kazakhstan is running a credit program to implement the drip irrigation system. But the small farms are not willing to risk. This project was a good platform to demonstrate the drip irrigation technology and advantages. The problems encountered: the lack of coordination of activities between suppliers of resources (electricity, water) and consumers. The lack of understanding of some</p>	<p>were organized with the participants of various target groups:</p> <ul style="list-style-type: none"> - Farmers, agricultural producers operating in the district and oblast; - Inhabitants of Shyrkyn village; - Representatives of the district and rural akimats. <p>Each meeting had the main goal – to ensure maximal coverage of the inhabitants of Sairam district for the purposes of broad public awareness of the ongoing climate changes on the project site, the methods of adaptation of the rural inhabitants to the climate change risks and demonstration of specific methods implemented by the project and raising the adaptation capacities of the rural inhabitants. The workshops were broadly covered by mass media:</p> <ul style="list-style-type: none"> - TV channels Otrar, Sairam Akshamy showed the video materials about the project and the advanced methods of agricultural production such as drip irrigation; - The articles have been published in the newspapers Zhanubi Kazakhstan, Panorama of Shymkent, Rabat. <p>To remove the barriers to applying the the adaptation methods implemented by the project the advocacy is needed of the</p>
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		inhabitants who graze cattle in the forest belts and destroyed the seedlings.	project experience in mass media, the awareness activities are needed to work with akimats, water management departments and the other related parties.
Other important activities of Project	The seasonal use of 179ha of the distant rangelands in the mountains reduced the grazing load on 361ha of degraded near-village territories. In future, after the full recovery the near-village pastures will be used to improve the adaptation capacities of the local community members.	The seasonal grazing implemented is a traditional technique to conserve the pastoral fertility and improve the sustainability of the local community members to the growing climate aridity.	The regular general meetings of the village inhabitants to explain the benefits of the seasonal use of rangelands. Weight measuring of cattle and analysis of cattle productivity for distant grazing and near-village grazing. Publishing and dissemination of data concerning the economic benefits of cattle farming based on the seasonal grazing pattern.

SECTION D: Environmental Benefits

5.0 Summary of the VRA/IAS, Volunteerism Activities and interpretation of the data/information in the M+E table

Item Description	Supportive Narrative Information and or Data		
Results of the Vulnerability Reduction Assessment	First/Initial	Second/Mid term	Third/Final
<p>Sustainability of the project outcomes is well demonstrated by the results of the workshops dedicated to vulnerability reduction assessment (VRA) of LC members to the climate change risks. There were 3 vulnerability reduction assessment workshops conducted in Shyrkyn village. The participants were asked 4 indicator questions as follows:</p> <ul style="list-style-type: none"> • How serious is the impact of the growing aridization (dry hot winds, reduction of snow cover, wind erosion) on your livelihood? • Where the unfavorable years with dry hot winds and reduction of snow cover, how serious will be the impact of on your livelihood? • Which are the barriers to using the forest protection belts and the drip irrigation system? How serious are these barriers? • Do you believe the community is capable to maintain the forest protection belts and the drip irrigation system at the end of the project? <p>To ensure the experimental integrity all the three workshops involved the same LC members who were asked the same 4 questions (indicators). The scores were assigned by the participants based on a five-grade scale, where 5 means heavy impact, confidence; 0 denotes low impact. The analysis of scores assigned by the workshop participants has shown the trends as follows:</p> <p><u>Indicator 1:</u> While in 2009 the local community members have given a high score to the climate change impact on the agricultural production and their livelihood, in the mid-term and at the end of the project the score was much lower. According to the participants, the main reason of improvement was the good results of the project activities. The village inhabitants have believed that the project activities will enable them to adapt the land farming to the</p>	<p>VRA workshop 1 was held on 3 March 2009</p> <p>Question 1: score 4,5</p> <p>Question 2: score 4,8</p> <p>Question 3: score 4,0</p> <p>Question 4: score 3,08</p>	<p>VRA workshop 2 was held on 27 May 2010</p> <p>Question 1: score 2,64</p> <p>Question 2: score 2,64</p> <p>Question 3: score 2,9</p> <p>Question 4: score 3,3</p>	<p>VRA workshop 3 was held on 8 April 2011</p> <p>Question 1: score 3,77</p> <p>Question 2: score 3,38</p> <p>3 Question 3: score 3,08</p> <p>Question 4: score 4,92</p>

<p>climate change risks and the further growth of the climate aridity on the project site.</p> <p><u>Indicator 2:</u>The high score of 2009 has shown that the village inhabitants realize the strong impact of the growing climate aridity on their livelihood with the use of the old land farming methods. The low scores in the middle and the end of the project have demonstrated that the methods such as development of forest protection belts and drip irrigation have reduced the vulnerability of the inhabitants to the growing climate aridity.The advanced technologies enabled to increase the incomes of the local community members due to the increased yielding capacity of the agricultural crops grown in the row spacing using the drip irrigation. The participants of workshop 3 have expressed their confidence that the installation of the drip irrigation equipment, the development of drip irrigation, saving of irrigation water guarantee the sustainability of the activities envisaged by the project in the following years.</p> <p><u>Indicator 3:</u>The scores under this indicator also showed the downward trend. The high score assigned at the beginning of the project was explained by the lack of starting capital to implement the new technologies.The list of constraints in 2010 included the external barriers: water consumption charges, electricity charges, low awareness of the government officials and rural inhabitants. At the same time the scores assigned by the participants in the middle and end of the project indicated that those barriers could be removed by way of broad awareness of the rural and district authorities as well as the local inhabitants of the project benefits and prospects.</p> <p><u>Indicator 4:</u>The most convincing in terms of the project sustainability in the following years was the answer to the question: whether the local community members are capable and willing to follow up the project activities at the end of financing. At the first workshop the score assigned (3,0) showed the lack of confidence of the local community members in implementing the activities without the donor support. High scores assigned at the third workshop (4,92 at the end of the project) demonstrated the full confidence of the local inhabitants in the efficiency of the methods</p>			
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<p>implemented, their capabilities, capacity and willingness to follow up the activities initiated by the project on the adaptation to the growing climate aridity on the project site.</p> <p>The method to conduct the vulnerability reduction assessment workshops is rather convincing to show the project sustainability and may be recommended for SGP projects and other programs to be implemented.</p>			
<p>Description of the voluntary contribution (capacities, knowledge, know-how, manual labor, materials, tools, etc.). Gender segregated data on communities engaged, opportunities and barriers to volunteerism, existing volunteerism activities before and after implementation of project.</p>	<p>There is a special form of volunteer movement in Kazakhstan – Asar, where the village inhabitants get together and work on a volunteer basis for some big events (construction of a house, repair of public premises, construction of a channel etc.). The project involved many volunteers; their input is assumed as a volunteer contribution. Those are the teachers and schoolchildren of high school, pensioners, unemployed and housewives living in Shyrkyn village who made a great contribution to planting the seedlings, their maintenance and protection.</p>		
<p>The results of the Impact Assessment System Indicators (Global Environmental Benefit focal areas + Livelihood and Empowerment)</p>	<p>The project results were assessed using the indicators of the Country (Kazakhstan) Community-Based Adaptation Program (CBA):</p> <ul style="list-style-type: none"> • <i>The number of methods implemented focused on the mitigation of risks induced by the climate change and included as part of the activities on natural resources sustainable management:</i> The project has implemented 4 methods as listed below: <ol style="list-style-type: none"> 1. Establishment of forest protection belts composed of fruit trees; 2. The drip irrigation system; 3. The technology of establishing seeded forage lands to restore the plough-land fertility; 4. The technology of seasonal pasture rotation. • <i>The number of tested approaches on the natural resources sustainable management to improve the livelihood of local community and protect the resources:</i> 4 systems of sustainable natural resources management have been tested by the project. • <i>The number of rules prepared/ adopted through the project implementation:</i> 		

	<p>Three rules (agreements with the Deputy Akim of Sairam district Mr. A. Amiraliyev and the Akim of Kainarbulak rural district Mr. A. Odamanov and the deed on water use) have been concluded on the project site.</p> <ul style="list-style-type: none"> • <i>The area on which the sustainable water and land resources management was established: 769ha of lands.</i> • <i>The number of participants (households) benefited from the activities of sustainable resources management (i.e. increase of income or food safety provision etc.): 53 households of Sharkyn village.</i> <p>The global environmental benefits (GEB) were measured by the area of land involved in the sustainable land use as a result of the project activities implemented and by implementing the method of sustainable development of the local community. The following SGP GEF indicators were used:</p> <p>Indicators of Global Environmental Benefits</p> <p>Land Degradation</p> <ol style="list-style-type: none"> 1. <u>The area (hectares) of degraded lands restored by the project.</u> 590ha of degraded lands have been restored by the project. 2. <u>The area (hectares) of landson which the sustainable management has been established by the project.</u> <p>The sustainable land management has been established on the area of 769ha of the project site and thevillage inhabitants deal with the climate-sustainable farming activities.</p> <p>Livelihood Indicators</p> <p>Livelihood</p> <ol style="list-style-type: none"> 1. The number of households benefited from SGP GEF project, 53 households have benefited from the project. 2. The number of individuals <u>benefited from SGP GEF project.</u> 30 low-income members of the local community have been provided the grant aid; 35 members of thelocal community bought the hay at a preferential price.
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	<p><u>The total value of products manufactured under the project using the ecosystem resources (in USD).</u></p> <p>Comparing the economic factors of 2008, 2009 and 2010 it may be stated that the use of drip irrigation resulted in a great economy of resources and money.</p> <p><u>2009:</u> The local community members have made the following savings by using the drip irrigation system: 250 USD have been saved for electricity cost 262 USD were saved for water consumption 1071 USD were saved for mineral fertilizers 221 USD were saved for lubricants Total saving: 1804 USD</p> <p><u>2010:</u> The local community members have made the following savings by using the drip irrigation system: 1240 USD have been saved for electricity cost 926 USD were saved for water consumption 1268 USD were saved for mineral fertilizers 815 USD were saved for lubricants Total saving: 4249 USD</p> <p>The following yields of wheat and lucerne planted in the row spacing have been harvested by the local community:</p> <p><u>2009:</u></p> <ol style="list-style-type: none"> 1. Wheat (productivity of 12,5hw/ha) – 7 tons 2. Chaff – 30 tons 3. Lucerne (hay) – 15 tons. <p>All agricultural products were distributed among the local community members on a free of charge basis. 36 low-income members of local community were provided aid in 2009.</p> <p><u>2010:</u></p> <ol style="list-style-type: none"> 1. Wheat - 4,9 tons; processed product (flour) – 3000 kg = 1020 USD 2. Cucumbers – 2000kg * KZT50 = 680 USD 3. Watermelons - 5000kg * KZT10 = 340 USD 4. Melons– 3000kg * KZT15 = 307 USD <p>Total value: 2347 USD.</p> <p>All agricultural products were distributed among the</p>
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	<p>local community members on a free of charge basis. 30 low-income members of local community were provided aid in 2010.6 local community members have improved their incomes, they started private business and are not referred to the low-income category.</p> <p>In addition 35 members of the local community were sold at a preferential price:</p> <ol style="list-style-type: none"> 1. Chaff (40 tons) for 1088 USD 2. Lucerne (20 tons) for 680 USD <p>Total revenues: 1768 USD.</p> <p>Indicators of Local Capacities Strengthened Strengthening</p> <ol style="list-style-type: none"> 1. <u>The number of NGO's/local communities involved in SGP GEF project</u> 1 NGO, 4 farms, 2 production cooperatives and the local community members of Shyrkyn village (total number: 473 persons) were involved in the project. 2. <u>The number of women participated/ involved in the project.</u> 186 women took part in the project implementation. 3. <u>The total amount of in-kind and financial support received under SGP GEF project for sustainability, expansion, and replication.</u> In 2010 to strengthen the project activities the Swiss Government provided the grant of US\$10,000. Through said grant the local community members have implemented the drip irrigation system at 6,5ha of the total area of the forest belt. The experience sharing visits have been organized to the project site; Akbota project (CBA Program) representatives have visited the project site to share the experience on water saving technologies.
<p>Describe the results of the Adaptation indicators measured during the project</p>	<p>The forest protection belts are irrigated using the drip irrigation system, a water-saving technique. Cereals, vegetables, melons and forage crops are grown in the row spacing. The drip irrigation system provides the sufficient soil moisture thereby the yields of cultivated agricultural crops are increased.</p> <p>The drip irrigation technology is the best way to adapt the land farming to the risks of growing climate aridity.</p>

<p>Provide a Summary Paragraph on the above monitoring and evaluation activities</p>	<p>The main objectives of the project grantees are as follows: to establish a forest protection belt; to ensure snow retention and increase the moisture content in soil; to save irrigation water using drip irrigation; to establish seeded fodder lands in the row spacing; to improve the soil fertility and the yielding capacity of the agricultural crops; sustainable use of pastures. The above objectives have been fully accomplished.</p> <p>The method implemented by the local community members was enlisted in the list of the best practices to reduce the vulnerability of rural inhabitants to the climate change risks of the Kazakhstan National Climate Change Adaptation Concept.</p>
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6.0 Project outcomes with respect to the following variables:

Objective 1: To establish forest protection belts in order to mitigate the climate change risks associated with the reduction of winter snowfalls, save moisture in soil and develop a more favorable climate.

The climate changes are manifested on the project site in the temperature elevation thus giving rise to the growing moisture evaporation from soil, soil dry-out and inhibition of vegetation. The risks of soil erosion are aggravating thus leading to diminishing of plough-land fertility. The favorable microclimate conditions to grow the agricultural crops are degrading. Intensified dry hot winds have resulted in the drying out of the fertile soil layer and the growing dust storms. The activities under Objective 1 were focused on the reduction of those risks on the project site. Objective 1 has successfully been accomplished and the positive outcomes have been gained.

With the prevailing winds taken into account the fallow land has been selected and the site of 20 ha has been planned for the forest protection belts. The seedlings of fruit trees (apples, pears, walnut etc.) have been purchased and planted in spring 2009.

To provide winter forage to the cattle maintained by the local community members the row spacing of forest belts was filled in with lucerne plantations.

Achievements of Objective 1: the forest protection belts have been established on the degraded lands exposed to the dry hot winds, wind erosion and dust storms. The seedlings have grown up for two years and function as the snow retention facility. The yields of agricultural crops planted in the row spacing are 2 times higher than on the conventional fields.

Objective 2 (co-financing): Reduction of pastoral degradation from overgrazing by developing the remote summer rangelands

The activities under Objective 2 included as follows:

- Training for the local community members in efficient use of remote rangelands and pastoral infrastructure development;
- Driving the young cattle, sheep, goats and horses to the summer distant rangelands;

Before the project, due to the lack of knowledge and material and financial resources all the cattle maintained by the local community was grazed within the limited area of the near-village pastures. Overgrazing and aggravation of pastoral conditions associated with the climate change (increased aridization) have resulted in pastoral degradation.

The project activities enabled to establish the sustainable pastoral management by developing and implementing the traditional grazing practice based on the use of the seasonal distant mountain rangelands.

Objective 3: The rational ground water management for the irrigation needs

The increased climate aridity as observed on the project site has resulted in the deficit of irrigation water thus impeding the land farming development in the area. The activities under Objective 3 were focused on addressing the above-stated problem:

- To establish the drip irrigation system for the forest protection belts and the lands under agricultural crops on the project site;
- To train the local community members in the drip irrigation technique and sustainable management of such technology;
- To publish the information booklet dedicated to the forest belts impact on the reduction of vulnerability of the local community members to the climate change risks;
- To disseminate the project experience that can be replicated by the other local communities.

The outcomes gained have demonstrated high efficiency of the drip irrigation, considerable water saving for the irrigation, improved yields of agricultural crops and the fast cost-recovery capability in connection with the water-saving technology implemented. The broad dissemination of the positive water-saving experience has raised the interest of the local inhabitants and the local authorities.

Objective 4: The local community is capable to take into account the climate-related risks in their water and land resources management

The activities under Objective 4 have been accomplished successfully: 11 workshops and round tables were organized where the members of local communities from the district have been made aware of the growing risks associated with the long-term climate changes. During the Field Day events the local communities were trained in the efficient use of forest protection belts to reduce the loss of moisture in soil and wind erosion; they were also shown the advanced water saving drip irrigation technology. The economic indicators showing the improvement of the local community's wellbeing have been demonstrated in various mass media (newspapers, TV programs, publication of information materials).

8.1. Organisational: Has this project impacted the organization?

Yes, it has. During the project the contracts have been made with the companies dealing with the installation and commissioning of drip irrigation and the automated irrigation systems. The skills and experience have been gained in combating the land degradation, water and wind erosion of soil, the techniques of water saving, electricity saving and manpower saving.

The project activities have raised a great deal of response in the district and oblast. The foundation has strengthened as an institution, has built up its authority in the field of water-saving technologies within the irrigated land farming. To date the foundation has established a new non-governmental organization to expand their activities in the South-Kazakhstan oblast.

8.2. Capacity Building: How were local capacities enhanced and how did it contribute to project success?

The local capacities have enhanced as far as the local inhabitants, being involved in the activities and the workshops organized within the project, have learned more about the climate change, the impact of climate changes on the land use management, the methods to be applied, the techniques of saving water, land and resources. The consultants and trainers gave training in the new technologies. The local inhabitants started practicing the knowledge gained. For the third year they send their cattle to the remote rangelands to Kaiyrshakty mountains. For the purpose of rational water use some households apply the drip irrigation system in their household gardens. Following the example of Kara-Kazim Production Cooperative growing fruit trees, 2 orchards containing over 30ha have been established in Shyrkyn village using the drip irrigation system. The process was fueled by the international highway «Western Europe – Western China» being constructed in a close vicinity to Shyrkyn village. In future the road will enable to sell the fruit products harvested from the forest belts of Kara-Kazim PC.

8.3. Poverty Reduction: How the project impacted poverty

To address the poverty problem the project involved unemployed women of Shyrkyn who throughout the project duration took part in planting, maintenance and weeding of the forest belts. For the time being 25 women are full time engaged in the orchard-keeping works. Therefore, the project has created jobs for the local inhabitants.

8.4. Community Participation

The inhabitants of Shyrkyn village were involved in the project development, implementation and evaluation. For the active involvement in the project activities and to enhance the motivation for the project efficiency, the local inhabitants were freely distributed hay, straw and vegetables produced throughout the project. For the third year of project duration the low-income families receive flour, grain, hay and straw.

The project involved the schoolchildren of Shyrkyn village. They were provided the two practical workshops. At the first one, held on 4 November 2010, the project consultant, agronomist Kozybek Kasimov has demonstrated the pruning technique for orchards and vineyards and preparation of fruit trees for winter. The second workshop was held in spring 2011 where the children have learned how to open the vineyard and perform spring soil processing around the seedlings as well as the other agricultural methods. In future, given the seasonality of agriculture, the training will be organized late autumn and winter thus raising the interest and the involvement of the local community.

8.5. Sustainable Livelihoods/Benefits

The short-term benefits gained from the project such as hay, straw, grain, flour, wage for field works and the other material benefits along with the grazing opportunities using the distant rangelands, saving the resources and time for cattle grazing and maintenance while being at remote rangelands (from May to September). The use of the drip irrigation system enabled to reduce water consumption from the local channel; the inhabitants stopped conflicting about their irrigation water needs.

The long-term benefits include the knowledge and skills obtained for the rational use of resources (water, electricity, lubricants and fuel, fertilizers), the experience of drip irrigation, the practice of efficient land use, specifically, planting fodder crops (lucerne), wheat, vegetables and melons

in the row spacing of the forest belt. The use of fruit forest belts as a protection from the prevailing wind Shakpak, the improved snow retention in the row spacing will develop the microclimate favorable for the growth of agricultural crops and increased yields. Moisture conservation in soil and the drip irrigation system will prevent the wind and water erosion of soil as well soil salinity. The long-term benefits shall also include the profits of the local community members to be made in future from selling from the yields of fruits and grapes. The village will be less exposed to the prevailing wind and its environment will improve. The seasonal pasture rotation will recover the ecosystem of near-village pastures.

8.6. Project policy impact

Owing to broad media coverage of the project a large number of visitors representing the governmental agencies, non-governmental organizations as well as international experts have visited the project site. As a result, in 2011 the akimat has allocated money for the major repair of the channel running via Shyrkyn village. The channel was cleaned and repaired along with the hydraulic works associated with the channel. The district authorities are interested in expanding the project experiences to the other villages of the district.

8.7. Sustainability Plan

The project sustainability plan has been developed. According to the plan, in the forth year as soon as the fruit trees produce yields, the project is planning to build warehouses to be equipped with the refrigerators to arrange the storage of grapes and other fruits. The profits to be gained from the project activities will be reinvested to establish small processing shops. In future the fruit plantations will be expanded with the use of drip irrigation. The local inhabitants involved in the project has been trained in the drip irrigation technology and can provide the installation and commissioning services to the other farms.

8.8. Financing and Co-financing

The project received the grant support of US\$50,000 under the Community-Based Adaptation Program (including the planned grant of US\$2,000). In addition, owing to the co-financing of the Swiss Government amounting to US\$10,000 the project has expanded its activities. The proponents' input was US\$66,805. Co-financing from the other donors was not provided for the project.

8.9. Replication: Is this project suitable for replication in other communities or regions. Plans or what has taken place in this regard

The project has enough potential for replication. For the purpose of rational water management, some households of Shyrkyn have started using the drip irrigation in their gardens. Following the project example of growing fruit trees, the neighboring LLP have established 2 orchards containing over 30ha in Shyrkyn village using the drip irrigation system.

8.10. Gender Mainstreaming:

Women of Shyrkyn village were equally represented in the project development and implementation. The gender focus was planned at the stage of project designed and was developed further through the project activities as evidenced by the growing number of women involved in th

eproject: 124 women were involved at the beginning of the project activities and reached 186 by the end of the project. Women took part in the field works: weeding, tree maintenance, harvesting and haymaking. In future women will harvest and process fruits to make fruit products.

8.11 Were all the objectives achieved? If not, what were the challenges related to the objectives not achieved?

All the project goals and objectives have been met. The grantees made a serious contribution to the project that has strengthened the project activities.

8.12 How did the project contribute to the outcomes and impact identified in the Country Programme Strategy?

In its outcomes the project «Forest Belts» is one of the most successful projects of the Community-Based Adaptation Program in Kazakhstan. In a short period of two years the project has generated good results. The grant support enabled the local community members of Shyrkyn village to start the land farming reorganization in view of the climate changes that are most clearly seen in the south of Kazakhstan where the project site is located. Even now the project activities, specifically, drip irrigation, generate a lot of interest in the district and oblast. The further growth of aridity will make the approaches tested by the «Forest Belts» project demanded, and the project site is an excellent demonstrational ground to learn the adaptation techniques.

9.0. Other Lessons learned not captured in section/part 6 above:

It needs to be noted that the project has performed a lot of work with the local community members that built the basis for successful project completion and expansion of its activities.

7.0 Annexes and other relevant documentation (could be sent if required)

8.0 Final comments by the Evaluator/Grantee/Individual filling the evaluation template

9.0 Digital photographs taken during the evaluation/appraisal with title to be attached here:

Name of Person Compiling Report:
Gulnar Bekturova

Signature:

Evaluation/Appraisal Date or Period:

April –July 2011

Date Evaluation/Appraisal Report was submitted:

October 2011