

**PA Taldykorgan Oblast Germans Society Wiedergeburt (Revival)
CBA Full Project Proposal to UNDP/GEF SGP**

PROJECT SUMMARY

1. **Project Title:** Adaptation to the Growing Climate Aridization through the Climatically Sustainable Pastoral Management Arrangements

2. **Project Site:** Northeast of Almaty Oblast, south of Lake Balkhash, north of Kushikzhal sands

3. **Proponent:** PA Taldykorgan Oblast Germans Society Wiedergeburt (Revival)

PA Taldykorgan Oblast Germans Society Wiedergeburt was established in 1992, legally registered in 1998 as a non-governmental organization. In 2004 Wiedergeburt was re-registered with the Ministry of Justice in connection with the charter amendments for opening a humanitarian drug store and obtainment of the license, Registration No. 3635-1907-00 dated 19.08.2004. On 28 February 2008 the company was reregistered under the same number in connection with obtainment of license for tourism operator activities.

The goals of Wiedergeburt Society are to revive, conserve and develop the German national culture, the language, traditions, ceremonies and customs; support the ethnic German minority; charity; to address the environmental problems of the region. Said goals are being implemented by Wiedergeburt through a number of projects sponsored by the German Federal Government.

The area of operation covers all districts and towns of Taldykorgan Oblast. The Society numbers 2800 members. The Society is the member of Kazakhstan Association of Germans Non-Governmental Organizations and the party to Kazakhstan Peoples Assembly.

4. **Project Objective:** To reduce the impact of aridization induced by the climate change through planting haloxylon and enhancement of pastoral and inundable resources.

5. **Authorized Representative:** Vladimir Molodtsov, Director of PA TGS Wiedergeburt

e-mail: wiedergeburt_tk@mail.ru

Phone: (7282) 24-44-67

Address: 61 Sevchenko St., Taldykorgan 040000, Almaty Oblast.

6. **Cooperating Organizations:**

GTZ/ German Society for Technical Cooperation

E-mail: annegret.westphal@gtz.de

Phone: 8(727)2635804

Fax: 8(727)2535819

Burlutobinsk State Forestry Management Office

E-mail: ardak1967@mail.ru

Phone: 8(728)4321431

Ekaterina Smerdina

Mukan Tolebayev Village, Sarkand District

Smerdin V. Farm

7. **Startup Date:** March 2009

8. **Project Period:** 24 months

9. **Total Project Cost:** US\$212,858

10. **Amount Requested:** US\$49,848

11. **Stakeholders' Input:** US\$163,010: GTZ, PA TGS Wiedergeburt

1.0 RATIONALE

1.1. **Community/Ecosystem Context:**

The growing climate aridity observed throughout Kazakhstan inflicted irrecoverable damage to biological diversity of South Pre-Balkhash Area along with the increasing anthropogenous pressure. Clearance of Haloxylon forests seen all over the country has led to destruction of natural ecosystems, soil cover disturbance, expansion of wind-drift sands area, reduction of the species composition of plants and animals.

Mukan Tolebayev Village is exposed to overgrazing. The growth of private stock, the disturbance of seasonal grazing, the lack of pasture rotation have resulted in deterioration of pastoral ecosystems and decline in incomes of the local community. Mass clearance of haloxylon degraded the soil cover and expanded the area of moving sands.

In soviet times, the local community used pastures seasonally thus enabling to save them from degradation. The Lepsy River was fitted with a dyke used for irrigation of 1200 ha of inundable lands and production of good quality hay for winter. The rural county had vast massifs of haloxylon forests that also served high-productivity pastures. To date, the system of pastoral grazing is completely disturbed. Year-round the cattle are grazed near the village. Restoration of destroyed dyke is a racking task for the local community. The allocation of budgetary funds for the dyke construction purposes is the competence of district authorities.

In recent years the reduced pastoral productivity is highly affected by low level of winter, spring and summer precipitation and the growing aridization. The areas of natural inundable hayfields and their productivity have reduced due to water level lowering in Lepsy. The deficit of winter forage has worsened the vulnerabilty of local community to these climate change risks.



Figure 1: A sauxal (*Haloxylon ammodendron*) tree.

Degradation of pastures caused by man-induced impacts as well as the growing climate aridity makes cattle farming profitless and forces the village inhabitants to poach and illegally harvest fish in Lake Balkhash. Further climate change to aridization will deteriorate the pastoral plant composition, make pastures unusable for grazing, lead to decrease of incomes of the local community and deprive the inhabitants of this economically depressive village from the livelihoods.

The project objective is to support and improve the LC's natural resources management i.e. to radically enhance the pastures by planting haloxylon and improving fertility of inundable hayfields.

The above objective will be achieved through the outcomes as listed below:

- (1) To implement the new method of inundable hayfield management by accumulating moisture and enhancing productivity in order to develop cattle farming for the LC
- (2) To improve the sustainability of pastures under the growing aridity conditions by planting haloxydon
- (3) To improve the LC's capacities of dealing with the radical enhancement of pastures under the growing aridity conditions by procuring the machinery and further planting of haloxydon
- (4) To disseminate the project gains for replication by the other local communities

1.2 Climate Context:

The climate changes as observed within the project site are as follows: It is found from the observations for many years that the climate of Pre-Balkhash Area has considerably warmed for the period of research. The temperature rise was observed practically everywhere and in all seasons. On average, the average annual air temperature increased by 0.2°C every 10 years. The highest rates of air temperature rise were observed in winter and reached 0.3-0.4°C/10 years. The lowest increases were observed in summer, by 0.1-0.2°C/10 years. The analysis of climate change indices for the period of 1936-2005 has shown that the data provided by most of meteorological stations indicate the average increase of hot days' period where the daily maximal temperature > 25°C by 2-3 days every 10 years.

The changes of moisture conditions for the period from 1936 to 2005 have shown that the main feature of is the growing aridity in the flat areas of deserts and semi-deserts of Kazakhstan as well as the neighboring territories. Projections of climate change reported in the IPCC AR4, national communication of Kazakhstan to the UNFCCC, predict that these changes will continue and intensify.

1.3. Impacts Context:

Practically all the observed climate changes have a many-sided effect on the ecosystems and society. For instance, the rise of winter temperatures and, consequently, the shorter period of frosty days may lead to the risk of damage to agricultural crops, the spread and impact of some pests and transmitters of diseases. As the warming intensifies the number of field mice grows up thus disturbing the balance of ecosystem. The adverse effect may be brought about by increased irregularity of precipitation whereby the rains are alternated by dry periods. This may aggravate the soil erosion. In addition, summer rains do not provide the necessary soil moisture since soil is not able to absorb water of storm rainfalls quickly and a certain portion of rainwater just runs off on the surface and evaporate at high air temperature. It follows from 2005-2007 analysis of adverse agri-meteorological events and the farms affected that the main adverse weather events were the atmospheric (60% of cases) and soil (20% of cases) draughts, storm rainfalls and hails (14%). The global warming combined with the other environmental stresses and human activities may lead to the rapid loss of the existing ecosystems especially those in arid regions covering the biggest part of Kazakhstan.

Expected Risk of Climate Change: The rise of average annual temperatures (specifically in summer), the drop of precipitation level, frequent draughts and dry hot winds aggravate the adverse impacts on natural ecosystems: the areas of moving sands expand and the ecosystems' restoration abilities weaken. The herdsmen mention degradation of grass stand, changes in the species composition of pastoral vegetation, the loss of most valuable forage grasses such as poaceous and some sage species. The negative impacts of climate changes are aggravated by the lack of haloxydon on the project site that retained snow and contributed to the accumulation of moisture and conservation of pastoral vegetation. The growing climate aridity increases the vulnerability of local communities, affects their livelihoods as far as productivity of cattle farming is directly related to the climate change risks. Frequent summer draughts and winter jutes result in lack of the fodder and loss of cattle.

The village inhabitants have to increase the number of stock thus aggravating the pastoral erosion problems. This leads to the degradation of pastoral biodiversity, destruction of ecosystems and desertification. Many rural inhabitants started poaching and illegal fish harvesting from Lake Balkhash. All these deteriorate the economic status of the local community living in Mukan Tulebayev Village.

1.4 Project Approach:

Even though most of the pastures of the project site are low-productive, their conservation from degradation and radical enhancement are very significant for both the local community and agriculture.

The project activities will include training, technical assistance to the LC members, implementation of the fertility improvement method in respect of inundable hayfields, reforestation planting haloxydon to ensure the radical enhancement of pastures. Said activities will reduce the risks of climate change as described below.

Climate change projections	Impacts on the community and ecosystems	Project activities to address the climate change impacts
1. The rise of average annual temperatures (specifically in summer), the drop of precipitation level	Degradation of pastoral biodiversity, the growth of soil erosion, emergence of moving sands leading to the decline of pastoral productivity; reduction of incomes of LC members	Haloxylon plantation on degraded lands that will improve the vegetation cover to protect the soil and preserve the fertility of pastures. These activities will also contribute to the conservation of moisture in soil and consolidation of moving sands.
2. The growing risks of draught and dry hot winds in summer period	Intensified evaporation, stresses on vegetation and animals; intensified soil dry-out and high exposure to erosion; the growing risk of fires	The agri-forestry activities will enable to preserve the humid microclimate, reduce the loss of moisture in soil and reduce the risk of erosion. The expansion of forestry cover and fire protection training will protect from forest fires.
3. Lowering of surface water levels	Decrease of favorable climate conditions to increase the fertility of inundable fields	The snow retention activities and fertilizer treatment of inundable soils will be positive for hay crops

The LC members will benefit from the more sustainable agricultural practices by improving the crop yield of inundable fields and enhancement of cattle productivity thus enabling to reduce the LC vulnerability to the climate change impacts. In addition, plantation of haloxylon on degraded lands will improve them and enable the local community to get the productive pastures in 3-5 years and improve the earning power of animal husbandry. In addition, the recommendations of the best practices of pastoral management will be prepared and published for the replication by the neighboring communities and on the district level.

2.0 COMMUNITY OWNERSHIP

2.1. Project Formulation:

The project will involve LC members of Mukan Tulebayev Village. The project site is in Sarkand District, Almaty Oblast. The area of the rural county with its Mukan Tulebayev Village (191 households, 898 inhabitants); Ulgi Village (51 households, 256 inhabitants) and Red Fisherman Village (36 households, 187 inhabitants) contains 48,902 ha. The agricultural lands area totals 38,519 ha including hayfields (647 ha), pastures (37,387 ha) and irrigated lands (15 ha) (household plots). The rural county in question has 18 farms; only 6 farms are actually operating. Cattle farming is the primary activity of the local community of M. Tulebayev Village. To date the rural county has 2134 heads of cattle; 3888 heads of small stock; 320 heads of horses and 18 camels.

The territory of rural county contained big haloxylon forests representing high-productivity pastures. For the time being the system of rational pastoral management is destroyed. The growing stock of private cattle and all-year grazing on the same rangelands have led to disturbance of all pastoral systems, degradation of soil cover and expansion of moving sands area. All said effects were multiplied under the climate change influence on the project site i.e. aridization.

The tasks set forth by TGS Widergeburt are focused on the growth of public support and improvement of pastoral resources management. The site survey and discussions with the inhabitants of Mukan Tulebayev Village were about the general conservation of pastures, their improvement and rational management of this natural resource. At the planning stage the local community members attended the meetings and learned about the importance of haloxylon plantations and improvement of fertility of inundable fields to protect from the climate change, conserve the biodiversity, water and soil. They have also learned about some pasture conservation methods. At the planning stage the community was involved in the discussion of project activities.

2.2. Project Implementation:

The project meetings with the members of LC initiative group will be held periodically (quarterly) to keep track on the progress of planned project activities, accomplishments and counter-challenges. Such project-related meetings will be not only for the consistency of the project impacts at the end of the project but also for the purpose of transparency and the growth of social capital among its members.

2.3. Phase-out Mechanism, Sustainability:

TGS Widergeburt will keep on seeking the resources to expand the work to be started by the project. It needs to be noted that one of the project objectives is to build the capacities of LC members and contribute to more sustainable methods providing livelihoods through the support of soil, water and biodiversity conservation activities. This objective is clearly formulated in the charter of TGS Widergeburt.

3.0 PROPONENT DESCRIPTION

3.1. Organization's Background and Capacities:

PA Taldykorgan Oblast Germans Society Wiedergeburt was established in 1992, legally registered in 1998 as a non-governmental organization. In 2004 Wiedergeburt was re-registered with the Ministry of Justice in connection with the charter amendments for opening a humanitarian drug store and obtainment of the license, Registration No. 3635-1907-00 dated 19.08.2004. On 28 February 2008 the company was reregistered under the same number in connection with obtainment of license for tourism operator activities.

The goals of Wiedergeburt Society are to revive, conserve and develop the German national culture, the language, traditions, ceremonies and customs; support the ethnic German minority; charity; to address the environmental problems of the region. Said goals are being implemented by Wiedergeburt through a number of projects sponsored by the German Federal Government.

The area of operation covers all districts and towns of Taldykorgan Oblast. The Society numbers 2800 members. The Society is the member of Kazakhstan Association of Germans Non-Governmental Organizations and the party to Kazakhstan Peoples Assembly.

The annual 2006 budget was KZT16,700,000 composed of the grants provided by German Agency for Technical Cooperation (GTZ), German Social Fund, Kazakhstan Association of Germans' NGOs, Almaty Oblast Akimat and Kazakhstan Peoples Assembly.

4.0 PROJECT DESCRIPTION

4.1. Objective, Outcomes and Outputs:

Project Objective: To reduce the impact of aridization induced by the climate change through planting haloxylon and enhancement of pastoral and inundable resources	
Outcome 1.0: Piloting the new technique of inundable hayfield management by accumulating moisture and enhancing productivity in order to develop cattle farming for the LC, allowing winter hay-feeding and thus reducing decreasingly sustainable grazing practices (<i>CBA-funded activities</i>)	
	Output 1.1: Working workshop. Purchase of fertilizers and soil treatment (20 ha)
	Output 1.2: Hay harvesting on the fertilizer treated fields; comparative analysis with the untreated hayfields
	Output 1.3: Repair of the irrigation channel network of hayfields; repair of connection roads; construction of dams
Outcome 2.0: To improve the sustainability of pastures under the growing aridity conditions by planting haloxylon	
	Output 2.1: Collection and procurement of haloxylon seeds; preparation of lands for plantation; haloxylon plantation (80 ha); haloxylon nursery (1 ha); snow retaining embankments
	Output 2.2: Protection of haloxylon plantations; field working seminar at the site of plantation; determination of survival capacity of haloxylon seeds; field workshop attended by the youth club
	Output 2.3: Development and implementation of rational near-village pasture management arrangements
	Output 2.4: Procurement of special machinery to plant haloxylon (GTZ-funded activity)
Outcome 3.0: To disseminate the project gains for replication by the other local communities	
	Output 3.1: Meetings, field visits, demonstrational workshop, monitoring
	Output 3.2: Preparation and publishing the booklet dedicated to the fertility improvement methods of pastures and inundable fields

4.2. Timetable

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

Reasons of negative answers	5. Give assessment of the barriers to implementing the climate change mitigation measures?	Reasons of positive answers
1. Household gardens (the area under 25 hundred square meters) maintain the minimal livelihood level of the local community	0 5,6 10	1. High prices for diesel oil
2. The minimal livelihood is maintained by 2-3 heads of cattle grazed on near-village rangelands	<i>How could the rating be improved?</i> 1. To establish the purchasing centers to purchase animal products from LC members 2. Governmental support of the program to replace the low-productivity by breeder cattle	2. The lack of necessary machinery 3. Low-productivity, low-breeder cattle 4. Problems with the sale of animal products

Reasons of negative answers	6. Give assessment of your capacities and willingness to support the project activities?	Reasons of positive answers
N/a	10	1. The position and livelihoods of the local community is critical. The actions are needed, so the LC members support the project activities
	<i>How could the rating be improved?</i> 1. Each workshop participant is willing to be involved in the project to the extent possible (labor input, equipment etc.)	

Reasons of negative answers	7. Will the local community be able to follow up (maintain the haloxylon plantations) after the project?	Reasons of positive answers
N/a	0 9,8 10	1. The project outcomes and their demonstration will provide impetus to involve the new LC members in the post-project activities
	<i>How could the rating be improved?</i> 1. To restore the dyke on Lepsy in order to expand the inundable fields thus involving more LC members in the post-project activities 2. To raise public awareness of the risks of climate change and enhance the positive impact of haloxylon forests on the climate mitigation	2. Live is forcing to progress

The summary of discussion results is provided in the table below

Vulnerability Assessment Reporting Form	Reduction	Transformed score
Indicator 1	9,4	0.6
Indicator 2	2,4	2.4
Indicator 3	10,0	0
Indicator 4	9,2	9.2
Indicator 5	5,6	4.4
Indicator 6	10,0	10
Indicator 7	9,8	9.8
VRA Score		5.2

The global environmental benefits (GEB) will be achieved by reducing the area of degraded lands to be restored by haloxylon plantations, revitalization of haloxylon ecosystems, rehabilitation of inundable hayfields

and development and implementation of the system of rational pasture utilization under the growing aridity conditions and aridization of climate.

The following GEB indicators will be applied:

- The area (ha) of degraded lands to be managed by the project on a sustainable basis
- The number of new methods (technologies) to be used in order to prevent degradation of pastures
- The number of local regulations to be developed by the projects and focused on combating the land degradation.

The tasks for the above are described below:

As a result of the project activities 80 ha degraded lands will be planted with haloxylon. To expand the area of haloxylon the nursery will be established (1 ha). The members of local community will be involved to develop and implement the system of seasonal grazing that will exclude overgrazing and pasture degradation. The project will implement the snow retention method, fertilizer treatment of inundable meadows and revive the inundable hayfields to collect winter reserves of coarse forage.

The indicators of project success and LC climate change vulnerability reduction will be as follows: plantation of haloxylon and restoration of ecosystem (100 ha); increase of quantity and improvement of quality of livestock products by implementing the system of seasonal grazing; collection of additional forage from inundable fields; improvement of the livelihood of LC members.

The project outcomes will be measured by the indicators as follows: the area of haloxylon plantations; survival capacity of seeds; changes in the soil mechanical structure; assessment of pasture productivity for the rotation system to be implemented; the output of livestock products (meat, wool); the growth of material wealth of LC members by changing the land resources management system. Such indicators will be linked with the meteorological data.

UNDP ADAPTATION INDICATORS:

The project assessment will be based on the CBA Country Program Strategy as follows:

- The number of methods/approaches to be implemented focused on the mitigation of risks induced by the climate change and included as part of the natural resources sustainable management activities;
- The number of tested approaches to the sustainable management of natural resources to improve the local livelihoods and protect the resources охраны ресурсов;
- The number of survived haloxylon seedlings on the project site;
- The growth rate (%) of crop productivity of inundable hayfield on the project site;
- The number of participants (households) benefiting from the sustainable resources management activities (such as increase of income or provision of food safety etc.).

The subjects of UNDP adaptation indicators are set out below:

- (1) The two activities will be deployed as part of the activities for sustainable farming on the project site
- (2) 11.1% of the project site will be under the climate-sustainable farming.

4.5. Project Management:

4.5.1. Management Structures

The main project stakeholder is PA Taldykorgan Oblast Germans Society Widergeburt that employs skilled consultants in the field of pastoral management, agricultural ecology and capacity-building of rural NGO's and communities.

The project will be managed by Vladimir Molodtsov who is experienced in dealing with the environmental projects. The project team includes the Chairman of Farmers Foundation of Kazakhstan Vladimir Levin, Head of Almaty Oblast Protection Resources and Environmental Regulation Department Nakhmedjan Kuzubayev, Environmental Scientist Gulnar Bekturova who has a long-term experience in agricultural ecology.

V. Molodtsov, Chairman of PA Taldykorgan Oblast Germans Society Widergeburt, will be responsible for the project activities. He has a civil engineering background and experience in agriculture. From 2000 he has been dealing with the environmental projects. Vladimir is a suitable applicant and is fit for the project management activities (Resume is attached). In addition, Mr. Molodtsov met the LC representatives and farmers and has established working relationships with them. On 25-26 November 2008 he organized a VRA workshop in Mulan Tolebayev Village and managed the project planning activities with the involvement of LC members. Vladimir Molodtsov will be assisted by Gulnar Bekturiva, Ecology Scientist, especially in organizing the community

meetings, workshops, project monitoring and evaluation; and Nakhmedjan Kuzubayev, Head of Almaty Oblast Protection Resources and Environmental Regulation Department. The project manager will also be assisted by Ekaterina Smerdina, the leader of LC initiative group and the head of farm operating in Mukan Tulebayev Village.

4.5.2. Relationship and Responsibilities of Proponent and Project Partners

GTZ (German Society for Technical Cooperation) is the main project partner that has been cooperating with the Proponent since 1998. Under GTZ support the Proponent is implementing a number of training, social and environmental projects.

In 2006 GTZ declared a tender to take part in closed competitions for inter-regional and republican linguistic and environmental camps and units. Widergeburt was a winning bidder and has implemented 8 projects.

In February 2007 Widergeburt submitted the project proposal «Ecotourism in Korinsky Clove of Jungar Alatau and its Impact on Biodiversity Conservation» where GTZ is the key partner. The grant was provided by the Global Environment Facility (UN Headquarter Small Grants Program) to establish the environmental camping site.

GTZ, as a stakeholder for the project «Adaptation to the Growing Aridization by Using the Climatically Sustainable Pastoral Resources Management Arrangements», has allocated the funds to procure the special equipment for haloxylon plantations.

The local partner is the village farm headed by Ekaterina Smerdina. Ms. Smerdina has a 7 years' experience in working with the village community whereby she gained the reputation of a respected, educated and responsive specialist. The farm was established in 2001 and is dealing with cattle farming, haymaking and production of vegetable crops. The farm has 550 ha of rangelands and 23 ha of hayfields. The farm cooperates with Murat Beisalbayev's farm having 1296 ha of pastures and 273 ha of hayfields. The project site is located at: Mukan Tulebayev Village, Sarkand District, Almaty Oblast.

For the purpose of successful project implementation an initiative group has been organized in the village represented by the farmers and cattle owners who are interested in promoting the project. The project idea is also supported by the local authorities represented by the Village Akim and Burkutobinsk State Forestry management Office. Said partner will allot the land parcels for haloxylon plantations, provide partial security of the planted lands and assist in organizing field days, training and workshops.

Vladimir Molodtsov will work in close liaison with the community members. He will interact with Ekaterina Smerdina and Kasymbek Seitjapar, Akim of Mukan Tolebayev Village since the akim's office deals with the community and village inhabitants. The meetings will be arranged with these persons to gain their support for the sustainable agricultural practices to be promoted by the community. He will also liaise with the persons from the other organizations to gain any sort of assistance in the field of agriculture. The farm and its leader Ms. Smerdina will support the activities to be implemented by the project.

5.0. PROJECT COST AND OTHER SOURCES OF FUNDING (US\$ 1:120)

5.1. Total Project Cost and Amount Requested:

Total project cost: **US\$212,858**

Amount requested: **US\$49,848**

Stakeholders' input: **US\$163010**

(Note: the project was provided the planned grant of US\$2000)

CBA-funded Items

	Items	Pers.	Months	Per month	2009	2010	2 years
	I. Personnel, labor						
1	Project Manager	1	24	58	700	700	1400
2	Coordinator	1	24	54	650	650	1300
3	Consultant	1	24	50	600	600	1200
4	Accountant	1	24	50	600	600	1200
5	Security	1	20	56	560	560	1120

	TOTAL	5			3110	3110	6220
	II. Equipment and materials						
1	Procurement of yourts	шт	1		2200		2200
2	Electric generators	шт	1		700		700
3	Fertilizers for 20 ha (1 kg = KZT160)	кг	6000		7100		7100
5	Purchase of haloxylon seeds for the plantation and nursery (1 kg = KZT1335)	кг	980		10900		10900
7	Consumables				300		300
	TOTAL				21200		21200
	III. Awareness, Advocacy						
1	3 workshops				2800	900	3700
2	Field meetings				630	600	1230
3	Booklet – recommendations (in Kazakh - 100 copies; in Russian – 100 copies)					700	700
5	Communications (Internet, intercity calls, fax)				200	150	350
	TOTAL				3630	2350	5980
	IV. Contracts						
1	Project monitoring					1000	1000
	TOTAL					1000	1000
	VI. Other Costs						
1	Haymaking from fertilizer treated fields				400	300	700
2	Comparative analysis with untreated hayfields				100	100	200
3	Preparation of lands for haloxylon plantations (70 ha)				7000		7000
4	Haloxylon nursery (1 ha)				3200		3200
5	Snow retention barriers				400	200	600
6	Repair of the irrigation channel-based network for hayfields, construction of dams				800	500	1300
7	Repair of connection roads				300		300
8	Banking fees				100	54	154
	TOTAL				12300	1154	13454
	VII. Contingencies, 4%				1994		1994
	Project TOTAL				42234	7614	49848

		Budget Item	Amount from CBA, \$	Amount from Proponent, \$		Amount from other partner – GTZ, \$		Total, \$
		(Description)		In cash	In kind	In cash	In kind	
Outcome 1	Output 1.1	2 days' training working workshop	600		200			800
		Purchase of fertilizers and soil treatment (20 ha)	7100		900			8000
	Output 1.2	Hay harvesting on the fertilizer treated fields;	700		400			1100
		Comparative analysis with the untreated hayfields	200		200			400

	Output 1.3	Repair of the irrigation channel network of hayfields, construction of dams	1300					1300
		Repair of connection roads	300					300
Outcome 2	Output 2.1	Collection and procurement of haloxylon seeds (70 ha + 1 nursery)	10900		530			11430
		Preparation of lands for plantation and planting haloxylon (70 ha)	7000		770			7770
		Preparation of lands for plantation; haloxylon plantation (80 ha); haloxylon nursery (1 ha)	3200		760			3960
		Snow retaining embankments	600		500			1100
	Output 2.2	Protection of haloxylon plantations	1120		480			1600
		Procurement of yourt and electric generator	2900					2900
		Field visit to determine the survival capacity of seeds and control the rodents	630		270			900
		4 days' training workshop attended by the youth club	2200					2200
	Output 2.3	Development and implementation of rational near-village pasture management arrangements	1000		1000			1000
	Output 2.4	Haloxylon planting; Procurement of special machinery to plant haloxylon				158000		158000
Outcome 3	Output 3.1.	Meetings, field visits	600					600
		2 days' demonstrational workshop	900					900
	Output 3.2.	Preparation and publishing the booklet dedicated to the fertility improvement methods of pastures and inundable fields	700					700
		Monitoring and evaluation	1000					1000
		Remunerations:						
		Project Manager	1400					1400
		Coordinator	1300					1300
		Chief Consultant	1200					1200
		Accountant	1200					1200
		Consumables	300					300
		Communications	350					350
		Banking fees	154					154

		Contingencies	994				994
	TOTAL:		49848		5010	158000	212858

The budget has been prepared based on the current exchange rate

Outcome 1.0: To implement the new method of inundable hayfield management by accumulating moisture and enhancing productivity in order to develop cattle farming for the LC (*CBA-funded activities*)

Output 1.1: Working workshop

400\$ x 2 days = **800\$**

Purchase of fertilizers and soil treatment (20 ha)

Consumption of fertilizer/ 1 ha (nitrate, carbamide): 300 kg x 20 ha x KZT160 = KZT960,000 = **US\$8000**

Output 1.2: Hay harvesting on the fertilizer treated fields, Comparative analysis with the untreated hayfields

20 ha x KZT6,600 = KZT132,000 = **US\$1,100**

Output 1.3: Repair of the irrigation channel network of hayfields, construction of dams; repair of connection roads:

Excavator works: 5 days x KZT24,000 = KZT120,000 = **US\$1000**

Construction of dams:

Excavator works: 2 days x KZT18,000 = KZT36,000 = **US\$300**

Repair of connection roads:

Bulldozer operations: 2 days x KZT18,000 = KZT36,000 = **US\$300.**

Outcome 2.0: To improve the sustainability of pastures under the growing aridity conditions by planting haloxylon (*CBA-funded activities*)

Output 2.1: Collection and procurement of haloxylon seeds; preparation of lands for plantation; haloxylon plantation (80 ha); haloxylon nursery (1 ha); snow retaining embankments

KZT1200 (1 kg of seeds) x 13kg (seeding rate per 1 ha) x 70ha = KZT1,092,000 = **US\$9100**

Nursery, 1 ha

KZT1200 (1 kg of seeds) x 233kg (seeding rate per 1 ha) x 1ha = KZT279,600 = **US\$2,330**

Preparation of lands for plantation and planting haloxylon (70 ha):

Tillage, disking, harrow treatment, planting: 1ha = KZT13,320 x 70 ha = KZT932,400 = **US\$7,770**

Preparation of lands for the nursery and planting:

Weed control, tillage disking, harrow treatment, planting, construction of protection embankment along the perimeter:

1 ha = KZT465,200 = **US\$3,960**

Snow retaining embankments:

KZT1,886 (per 1 ha) x 70 ha = KZT132,000 = **US\$1100**

Output 2.2: Protection of haloxylon plantations; field workshop; determination of the survival capacity of seeds and control the rodents, field workshop attended by the youth club

Security of plantations:

1 month = KZT9,600 x 20 months = KZT192,000 = **US\$1600**

Purchase of yurt:

KZT264,000 x 1 yurt = KZT264,000 = **US\$2200**

Electric generator:

KZT84,000 x 1 generator unit = KZT84,000 = **US\$700**

Field visit to determine the survival capacity of seeds:

KZT60,000 = **US\$500**

Rodent control:

KZT48,000 = **US\$400\$**

4 days' training workshop attended by the youth club (25 persons):

Transport, accommodation, boarding

1 day = KZT2640/ 1 person x 25 persons x 4 days = KZT264,000 = **US\$2200**

Output 2.3: Development and implementation of rational near-village pasture management arrangements

Monitoring of near-village pastures: transport, accommodation, boarding: 1 geobotany specialist; survey of pastures and elaboration of the arrangements – **US\$1000.**

Output 2.4: Procurement of special machinery to plant haloxylon (GTZ-funded)

Tractor Foton – 1 unit, loader – 1 unit, plough – 1 unit, caterpillar tractor - 1 unit, detachable equipment: 1 shovel, 1 cart; road vehicle, UAZ – 1 unit; purchase of seeds and planting works.

Total amount KZT19,000,000 = **US\$158,000**

Outcome 3.0: To disseminate the project gains for replication by the other local communities (*Internally funded activities*).

Output 3.1: Meetings, field visits, demonstrational workshop

Field meetings, 2 field trips:

Transport, accommodation, boarding: KZT36,000 x 2 visits = KZT720,000 = **US\$600**

2 days' demonstrational workshop:

Transport, accommodation, boarding: KZT54000 x 2 days = KZT108,000 = **900\$**

Output 3.2: Preparation and publishing the booklet dedicated to the fertility improvement methods of pastures and inundable fields:

100 copies in Russian and 200 copies in Kazakh = 300 copies x KZT250 = KZT75,000 = **US\$625**

Translation to Kazakh: KZT9,000 = **US\$75**

Monitoring and evaluation = **US\$1000**

Remunerations:

Project Manager 58\$ x 24 months = **US\$1400**

Coordinator 54\$ x 24 months = **1300\$**

Consultant 50\$ x 24 months = **1200\$**

Accountant 50\$ x 24 months = **1200\$**

Consumables:

Toner, paper, pens, folders, note pads, posters, visual aids, handouts: KZT36,000 = **US\$300**

Communications:

Telephone, fax, intercity calls, Internet = **350\$**

Contingencies - **994\$**

Banking fees = **154\$**

Total cost of technical aid for all Outputs = US\$212858

Output 1.1 – 800\$ +8000\$ = 8800\$

Output 1.2 – 1100\$ + 400\$ = 1500\$

Output 2.1 – 9100\$ + 2330\$ + 7770\$ + 3960 \$+ 1100\$ = 24260\$

Output 2.2 – 1600\$ + 2200\$ + 700\$ + 500\$ + 400 \$+ 2200\$ = 7600\$

Output 3.1 – 158000\$

Output 3.2 – 1000\$ +300\$ + 300\$ =1600\$

Output 4.1 – 600\$ + 900\$ = 1500\$

Output 4.2. - 625\$ + 75\$ + 1000\$ + 1400\$ + 1300\$ + 1200\$ + 1200\$ + 300\$ + 350\$ + 1994\$ +154\$ = 9598\$