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**PLAN FOR DISASTER RISK REDUCTION AND ADAPTATION TO CLIMATE CHANGE IN
AGRICULTURAL SECTORS OF DON-BULAK AYIL AYMAK**

Kyrgyz Republic, 2021

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INTRODUCTION

The plan for disaster risk reduction and adaptation to climate change of the Aiyl Aimak was developed by the Don-Bulak Aiyl Okmotu in accordance with the requirements of legislative and regulatory legal acts of the Kyrgyz Republic, regulating the activities of state bodies and local self-government bodies in the field of disaster risk reduction and adaptation to climate change in cooperation with the regional state administration, territorial structural divisions of ministries, state committees, administrative departments and other state bodies.¹

The main objectives of the plan for disaster risk reduction and adaptation to climate change are:

- ◆ identification of priority activities to reduce the risk of natural disasters and adaptation to climate change and their integration with the strategy of socio-economic development of Aiyl Aimak;
- ◆ determination of goals and timing of activities;
- ◆ determination of the required resources for implementation, including allocations from various budgets;
- ◆ determination of indicators for the implementation of the plan and a mechanism for monitoring its implementation.

Activities for disaster risk reduction and adaptation to climate change are identified based on:

-analysis of climatic conditions of agricultural sector exposure Don-Bulaksky Aiyl aimak to dangerous natural phenomena and consequences of emergency situations;

-analysis of the state of agriculture;

-development of objectives identified by the community, government authorities and Don-Bulaksky Aiyl Okmotu;

-estimation of the allocated own financial resources, the republican budget and transfers from external financial sources.

The DRR and ACC plan is a detailed version of section III of the civil protection plan of Aiyl Aimak "Measures to prevent emergency situations and increase preparedness", approved by order of the head of the Aiyl Okmotu - the head of the civil protection of the Don-Bulak Aiyl Aimak No. 5 from 02/13/2015, focused on agricultural sectors (crop production, forestry, livestock, fish farming, poultry farming, etc.) complementing the Strategy of Socio-Economic Development of Aiyl Aimak for 2018-2023, approved by the decision of the local Kenesh of the Don-Bulak Aiyl Aimak, Resolution No. 78 of March 1, 2018²

The content and structure of the plan were discussed at the meetings of the steering committee and the technical working group, between national stakeholders (MAFPM, MES, SAEPP, National Statistical Committee, State Agency for Self-Government and Interethnic Relations) and approved by the Project Steering Committee under TCP / KR / 3702

¹ Annex 1. Regulatory Framework for Disaster Risk Reduction and Climate Change Adaptation in the Agriculture Sector

² Appendix 2. Strategy of socio-economic development of Aiyl aimak for 2018-2023

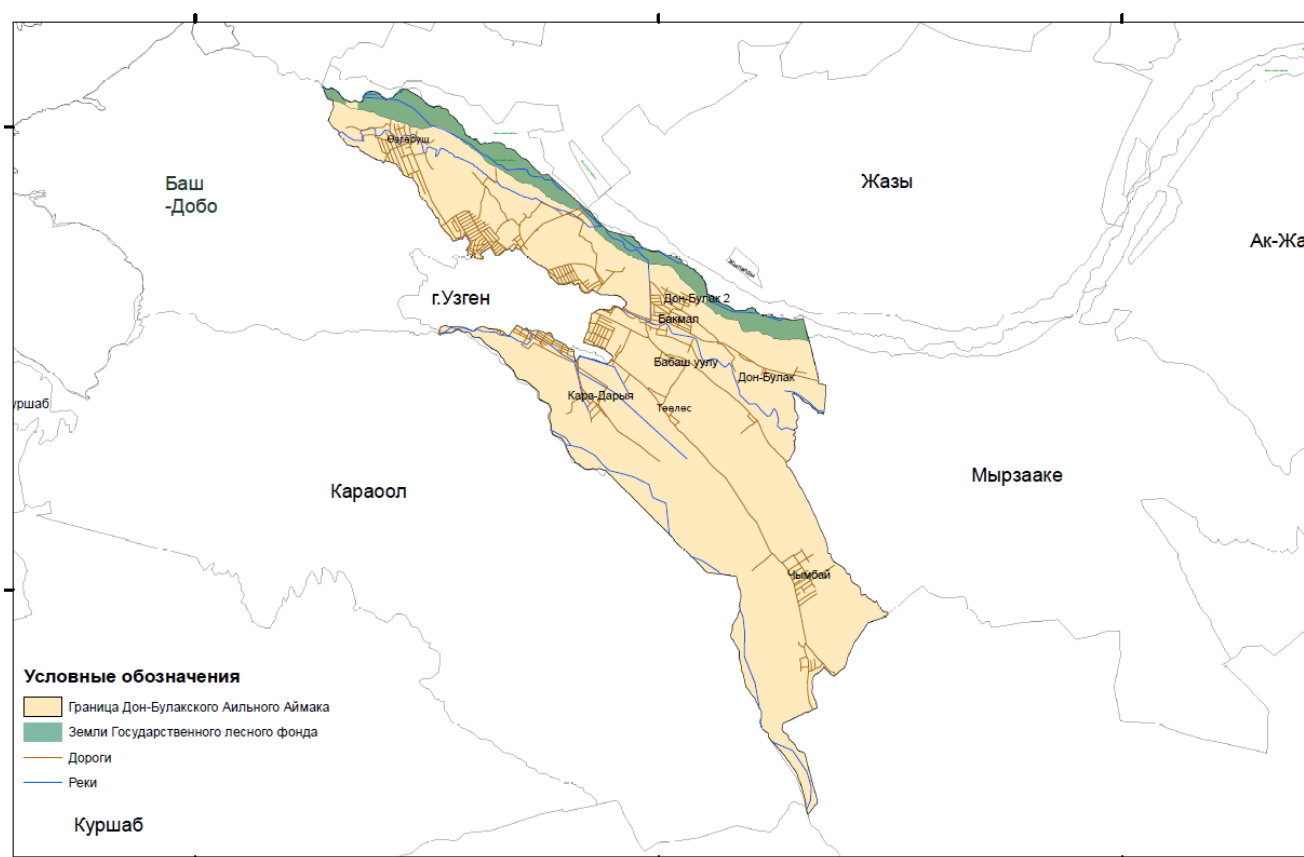
CHAPTER I.

OVERVIEW OF AGRICULTURAL SECTORS IN DON-BULAK AYIL AYMAK

Don-Bulak Aiyl aimak was organized in 1975 and is part of the Uzgen district of the Osh region. The central estate is Bakmal town, located 4 km from the regional center of Uzgen and 64 km from the regional center - Osh.

According to the administrative boundaries (Fig. 1), the territory of the Aiyl aimag is located in the valley of the Zhazy River.

Fig. 1. Administrative boundaries of Don-Bulak Aiyl aimak³



Aiyl aimak area is 15369.27 ha, which is 10.9% of the area.

There are 10 (ten) settlements (villages) on the territory of the aiyl aimak, Chymbai, Bakmal, Kara-Darya, Don-Bulak, Ozgorush, Dzhany-Abad, Toolos, Babashaluu, Bekse-Zhol, Michurino.

The resident population according to the National Statistical Committee of the Kyrgyz Republic as of January 1, 2019 is **17,513** man.

³ Administrative boundaries of the Don-Bulak Aiyl aimak. <https://drive.google.com/file/d/1wbuGzTme5goyXN2-b0w75VjStG6CyfrO/view?usp=sharing>

Table 1. Demographic indicators (distribution of the population of the Don-Bulak Aiyl aimag by individual age groups)

№	Names of settlements	Years	Children		Able-bodied		Pensioners		Households	Total
			Girls	Boys	Women 16-62 years old	Men 16-62 years old	Women	Men		
1.	Chymbai	2017	441	512	1214	1202	96	14	596	3569
		2018	461	509	1174	1165	149	56	600	3514
		2019	375	423	1196	1227	136	68	601	5451
2.	Ozgorush	2017	613	672	983	1030	86	71	683	3455
		2018	551	620	1239	1234	160	72	697	3876
		2019	602	609	1255	1250	88	89	698	3893
3.	Bakhmal	2017	385	312	348	372	74	69	220	1247
		2018	251	224	442	443	79	36	222	1260
		2019	294	276	524	512	76	42	225	1724
4.	Don-Bulak	2017	390	407	1009	963	230	248	569	3247
		2018	430	469	1051	1054	138	85	570	3227
		2019	427	464	1034	1059	147	91	573	3222
5.	Zhany Abad	2017	299	370	632	718	38	18	424	2075
		2018	332	386	771	787	60	24	435	2360
		2019	365	393	787	828	65	28	438	2466
6.	Babash Uulu	2017	109	98	136	125	13	6	100	487
		2018	70	72	150	163	24	5	100	494
		2019	70	67	161	162	6	4	103	496
7.	Bokxo-Zhol	2017	90	108	198	170	27	35	117	628
		2018	95	106	205	201	19	8	117	635
		2019	101	111	229	211	19	9	119	680
8.	Kara-Darya	2017	65	88	124	123	45	58	120	503
		2018	62	76	160	177	22	10	120	507
		2019	59	74	163	175	22	14	123	507
9.	Michurin	2017	68	54	144	135	21	34	76	456
		2018	42	35	69	76	19	15	56	256
		2019	41	35	70	80	20	25	39	263
10.	Toolos	2017	158	153	207	210	35	30	150	790
		2018	120	129	248	265	27	13	150	802
		2019	123	122	247	271	33	15	155	811
TOTAL		2017	2618	2774	4995	5045	665	673	3055	16770
		2018	2415	2626	5509	5565	688	324	3065	17137
		2019	2457	2574	5666	5775	657	382	3074	17513

According to Table1. the birth rate increases annually by 2-2,5%.

According to demographic indicators, the group of the most vulnerable part of the population of the Don-Bulak Aiyl aimag is about 67% of the total population, that is, 11 736 people (children under 16, women and pensioners).

Full demographic data, disaggregated by age and sex of the population, are reflected in the Civil Protection Plan of the Aiyl Aimak, approved by order of the head of the Aiyl Okmotu - the head of the civil protection of the Don-Bulak Aiyl Aimak No. 5 from 02/13/2015...

1.1. Land resources

According to official data (1988) obtained from the State Agency for Land Resources under the Government of the Kyrgyz Republic (Kyrgyzgiprozem), an analysis was carried out by land categories in the territory of the Don-Bulak Aiyl Aimak. For the analysis, quantitative indicators were determined for each category of land and a conditional degree of land value was assigned⁴ (Table 1).

Table 2. Data of Don-Bulak Aiyl aimak by land category

Distribution of land category by purpose	Area ha	% of the total area of AA	Land_value
Agricultural land total	8967.72	58.35	
Irrigated arable land	2505.27	16.3	3
Pasture	5262.66	34.24	2
irrigated pastures	17.01	0.11	3
Shrubs	514.64	3.35	2
Gardens	249.74	1.62	3
The woods	112.73	0.73	3
Semi-shrubs	28.57	0.19	2
Berry	277.09	1.8	3
Lands for industrial, transport, communications, energy, defense and other purposes Total	18.06	0.12	3
Lands of settlements;	306.71	1.99	3
Water fund lands;	346.21	2.25	3
Forestry lands;	5364.81	34.9	3
Fisheries land	265.64	1.72	3
Other lands	365.77	2.38	one
TOTAL for Ailny Aimak	15369.27		

Quantitative indicators (area of objects) were calculated using the tool "Geometry Calculator ArcGIS Desktop software, and based on the geometry calculation, the percentage⁵...

According to table 2, according to the state registration of the Aiyl aimak, agricultural land is 8,967.72 hectares, which is 58.35% of the total area of the Aiyl Aimak. The main part of agricultural land is pasture - 5279.67 hectares, that is, 58.87% of the total area of agricultural land.

⁴ The definitions are taken according to the conditional gradation with the greatest economic damage and are not constant.

⁵ Appendix 9. Report on risks in the territory of Don-Bulak Aiyl aimak and exposure to natural disasters

An insignificant part of agricultural land is irrigated arable land - 2505.27 hectares, that is, about 27.93% of the total area of agricultural land, which are mainly located in the valley part of the Aiyl aimak and are subject to the risk of mudflows.

According to statistical data for 2020, there are 9 hectares of unused arable land in the Don-Bulak Aiyl aimak. 5 hectares of these irrigated arable land in the village. Chymbai, washed away as a result of erosion processes in the period 2014-2018, since they were not written off from the accounting of agricultural lands. The remaining 4 hectares of rain fed arable land are not used due to the remoteness from settlements.

Table 3. Area of agricultural land as of 01.01.2020 (according to the working group on the development of a plan for disaster risk reduction and adaptation to climate change in the agricultural sector of the Don-Bulak AA. Appendix 8)⁶

Item No.	Names of settlements	Number of households	Agricultural land area										
			Irrigation		Rainfed		Hayfields		Gardens		Vegetable gardens		Total
			Total	For 1 household	Total	For 1 household	Total	For 1 household	Total	For 1 household	Total	For 1 household	
one.	Chymbay	601	304	0.5	27	0.04	106	0.17	8.55	0.01	63	0.1	508.55
2.	Ozgorush	698	108	0.15	-	-	193	0.28	-	-	58	0.08	359
3.	Zhany Abad	438	392	0.8	11	0.02	56	0.12	48	0.1	32	0.07	539
4.	Don-Bulak	573	152	0.26	-	-	28	0.04	10	0.02	31	0.05	221
five.	Michurino	39	55	1.4	-	-	-	-	-	-	12	0.3	67
6.	Bakhmal	225	510	2.2	14	0.06	-	-	-	-	57	0.25	581
7.	Toolos	155	59	0.3	-	-	67	0.43	11.1	0.07	46	0.3	183.1
8.	Boxo-Zhol	119	67	0.5	-	-	59	0.5	9	0.07	31	0.25	166
nin	Kara-Darya	123	65	0.5	-	-	51	0,4	23	0.18	19	0.15	158
ten.	Babash uulu	496	275	0.5	-	-	-	-	11.09	0.02	45	0.09	331.09
	FPZ		518		15		101		129				763
AA total		3467	2505		67		937		249.74		394		3876.7

Table 3 shows that each household has 20-30 acres of irrigated land. A small area of irrigated land allows the population of the Don-Bulak Aiyl aimak to grow mainly vegetable crops, and also, given the location of irrigated lands near the river Zhazy, in the villages of Bakhmal and Michurino, a special place in agriculture is given to rice growing.

Due to the small area of irrigated plots, vegetable gardens, orchards), care for them (watering, weeding) is mainly entrusted to older children and women.

Due to the scarcity of hayfields, difficulties arise in the development of animal husbandry.

⁶ Appendix 8. Reference data on *Don-Bulaksky AA*.

1.2. Plant growing and animal husbandry.

The population of the Don-Bulak Aiyl aimak is mainly engaged in crop production and animal husbandry. In the Aiyl aimak, there are no state farms in the field of agriculture (breeding farms, experimental stations, etc.); there are 4 private agricultural cooperatives, 1 seed farm and 2,969 private peasant households. All peasant farms have shared land plots and livestock.

In the Don-Bulak Aiyl Aimak, there are production facilities and the provision of services in the agricultural sector:

- two mills (in the village of Bakmal and the village of Kara-Darya);
- veterinary service in Tolos village;
- a seed farm (in the village of Bakmal);
- 4 agricultural cooperatives (in the village of Bakmal);
- 1 WUA;
- Uzgen State Fisheries.

1.2.1. Plant growing

The geographical location of the Don-Bulak Aiyl aimak creates a favorable environment for the development of crop production.

Table 4. *Sown area structure for 2020⁷*

Item No.	Names of crops	Sown area (ha)	Productivity (t \ ha)	Expected harvest (t)
one.	Wheat	185	36	660
2.	Barley	10	30	300
3.	Corn	550	60	3300
4.	Rice	327	30	1100
five.	Potatoes	50	140	700
6.	Vegetables	356	194	6906
7.	Fruit	79	58	482
8.	Perennial forage crops	205	82	16810
nine.	Haymaking	404	20	8080

As can be seen from Table 4, the main sown area is allocated to agricultural crops intended to provide food for the population and to satisfy their own needs, the surplus is sold in the markets of the cities of Uzgen, Osh and Karasu (more often in the city of Uzgen).

Table 5. *Production of crop products (according to the working group on the development of a plan for disaster risk reduction and adaptation to climate change in the agricultural sector of the Don-Bulak AA)⁸*

No.	Products by type:	Unit rev.	2017	2018	2019
one	Wheat	Tons	970	606	546
2	Corn	Tons	3478	3691	3282
3	Potatoes	Tons	336	725	800
4	Barley	Tons	25	30	30
five	Rice	Tons	792	1033	1043
6	Sunflower	Tons	21	0	0

⁷ Appendix 8. Reference data on Don-Bulak AA.

⁸ Appendix 8 Reference data on Don-Bulak AA

7	Vegetables	Tons	8689	8807	7456
8	Fruit	Tons	465	480	476
nine	Perennial forage	Tons	1424	1390	16860
ten	Hay	Tons	7950	8000	8015

An additional income part of the residents of the AO is the lease of areas of fruit trees from the forestry, where, on average, tenants are allocated areas of up to 1 hectare. The average fruit harvest is between 500 and 1000 kg. Fruit prices vary from 50 to 120 som per kg.

1.2.2. Livestock raising.

Since the region is more crop-growing, animal husbandry is mainly aimed at meeting the needs of the population.

Table 6. *The number of registered agricultural animals in AA as of 01.01.2020 (according to the working group on the development of a plan for disaster risk reduction and adaptation to climate change in the agricultural sector of the Don-Bulak AA.*

No. p.p.	Names of settlements	Cattle	Horses	MRS	Bird	Hives
one.	Chymbay	1160	291	2369	3469	140
2.	Ozgorushch	2061	117	2505	2600	
3.	Zhany-Abad	535	35	1000	2018	
4.	Bakhmal	282	fifteen	963	745	400
five.	Kara-Darya	262	12	507	630	
6.	Toolos	450	40	900	1220	
7.	Boxo-Zhol	250	60	1000	958	
8.	Babash-Uulu	205	20	550	1115	
nine.	Don-Bulak	710	41	1166	1307	150
ten.	Michurin	thirty	fifteen	120	1372	250
	Total for JSC	5945	646	11080	15434	940

According to the information of the Don-Bulak Aiyl Okmotu and Zhayit Committee, the total area of pastures as of 01.01.2020 is 5262.66 hectares.⁹

The total area of unused pasture land is 1071 hectares:

- pastures Chon-Tash, with a total area of 390 hectares, Kara-Dobo, with a total area of 681 hectares are not used due to the rocky relief and the density of shrubs;
- On the Chon-Tash and Kara-Dobo pastures, 2418 hectares are additionally rented from the Uzgen forestry enterprise pastures;

Table 7. *Distribution of livestock by pasture for 2020 (according to the Association of Pasture Users of the Don-Bulak Aiyl Aimak)¹⁰*

No. p.p.	Names of settlements	Number of households	Name of pastures	Number of livestock
one.	Chymbay		Kara-Dobo	Cattle - 1160, MRS - 2078, horses - 291

⁹ Appendix 10. Pasture data

¹⁰ Appendix 10. Pasture data

2.	Ozgorushch		Chon-Tash, Oy-Alma	Cattle - 2061, MRS - 2488, horses - 117
3.	Zhany-Abad		Iiri-Suu	Cattle - 335, MRS - 990, horses - 35
4.	Bakhmal		Chon-Tash	Cattle - 282, MRS - 863, horses - 15
five.	Kara-Darya		Chon-Tash	Cattle - 262, MRS - 500, horses - 12
6.	Toolos		Chon-Tash	Cattle - 450, MRS - 900, Horses - 40
7.	Boxo-Zhol		Chytty (Kurshab AA)	Cattle - 250, MRS - 1000, horses - 60
8	Babash-Uulu		Chytty (Kurshab AA)	Cattle - 205, MRS - 550, horses - 20
nine	Don-Bulak		Oh-Alma	Cattle - 710, MRS - 1135 horses - 41
ten	Michurin		Chon-Tash Oy-Alma	Cattle - 30, MRS - 100 horses - 15

According to the data in Table 7, on average for the Don-Bulak Aiyl Aimak, there are 1.2 hectares per head of cattle, 0.69 hectares of pasture for small cattle, which corresponds to the recommendations of the National Association of Pasture Users of Kyrgyzstan (at the recommended rate for 1 livestock of cattle-1 ha, livestock MRS-0.2 ha).

At the same time, a comparative analysis of Tables 5 and 6 shows that in order to meet daily needs for food (milk), the population leaves up to 3.5% of cows (cattle), 4.3% of sheep and goats on the nearest pastures.

According to Table 7, the produced livestock products mainly cover the needs of the population for food and a small part is sold on the market in the city of Uzgen.

Table 8. *Produced livestock products in Don-Bulak Aiyl Aimak (according to Don-Bulak Aiyl Okmotu)*

No.	Products by type:	Unit rev.	2017	2018	2019
One	Meat	Tons	7500	7620	7760
2	Milk	Liter	32300	36250	36760
3	Wool	Tons	fifteen	16.09	17
4	Eggs	Thousand.	380	404	505

Average consumer prices for livestock products in December 2019 in Uzgen were on average: fresh milk - 36.47 soms; lamb - 298.05 soms; beef - 324.83 soms.

1.3. Forestry.

Forests on the territory of the Don-Bulak Aiyl aimak are represented by mountain plantations and are quite diverse. Most of the forests are located at an altitude of 1300 to 3000 meters above sea level.

1.3.1. Forests of Don-Bulak Aiyl Aimak

As of January 1, 2018, the forested area of the Don-Bulak Aiyl aimak is 5477.54 ha, or 35.6% of the total area of the Aiyl aimak. The main forest-forming species are apple, hawthorn, willow, elm and juniper.

From the side of the Aiyl Okmotu, deforestation to provide the population with firewood is not provided, the population is provided with firewood through the forestry, and deadwood is also used in the floodplains of the Zhazy and Kara-Darya rivers.

1.3.2. Uzgen state forestry management.

According to the Uzgen forestry enterprise¹¹, the Myrza-Ake forestry of the Uzgen state enterprise is located on the territory of the Aiyl aimak. The total area is 5364.81 hectares, mainly willow, elm forests. On 79 hectares of forest there are 257 tenants working on the cultivation of fruit trees and almonds.

¹¹ Appendix 11. Data on Uzgen forestry

Sanitary logging in the forestry is provided, provision of the population of the Don-Bulak Aiyl aimak with construction timber and firewood is carried out through the forestry "Kolduk", "Zhazy", "Ak-Terek".

In each forestry, seedlings are planted annually on an average of 5 hectares and a school on 0.02 hectares, and nurseries are created on 0.06 hectares.

1.4. Fish industry.

On the territory of the Don-Bulak Aiyl aimak in the village of Kara-Darya there is a state enterprise "Uzgen Fish Industry". Uzgen fish farm, founded in 1960, the total area is 171 hectares. It has 64 ponds, where three types of fish are raised that prefer cold and warm water - carp, grass carp and silver carp. About 20 tons of fish, 3,800 tons of planting material, or 1 million 143 thousand fry are raised annually. All products are supplied only to the domestic market, profits are transferred to the state budget.¹²

Table 9. Reproduction for 2019.

No. p / p	No. ponds	Area in (ha)	Natural Fish / ness in (kg)	Planted	
				Malkov (carp)	Larvae p / poisonous
				tons	tons
one	VP-2	2.8	280	84.0	500.0
2	VP-3	3.3	330	99.0	500.0
3	VP-4	2.2	220	66.0	500.0
4	VP-5	2.6	260	130.0	100.0
five	VP-7	2.2	220	53.0	400.0
6	KP-1	1.5	150	28.0	200.0
7	KP-2	1.5	150	27.0	200.0
8	KP-3	0.9	90	10.0	200.0
nine	KP-4	1.0	100	13.0	200.0
ten	KP-5	3.3	330	62.0	200.0
total		21.3	2130	572	2900

Table 10. Production of marketable fish in the Ugen state fish farm.

Production of marketable fish in (tons)	2018	2019	2020 in 10 months
Total:	13.7	24.6	16.4

As can be seen from tables 9 and 10, the produced fish product provides for the satisfaction of only the domestic market.

However, at present the fish farm is experiencing difficulties due to limited funds for development. In this regard, the fish farm also has to deal with rice cultivation, for which more than half of the territory (reservoirs) is allocated, that is, 90 hectares.

Table 11. Rice production.

Rice production in (tons)	2018	2019	2020
Total:	253.8	238.3	255.9

According to Table 11, the main income of the State Enterprise of the Uzgen Fish Farm is rice production.

¹² Appendix 12. Data on Uzgen fish farm.

The fish farm is almost annually exposed to various natural and climatic disasters, during periods of high water - mudflows and habits, in low water - a lack of water, both for fish farming and for growing rice.

The fish farm itself was built during the Soviet era. However, over the years of independence, due to the failure to take DRR measures, it was repeatedly exposed to mudflows and floods, which led to the complete destruction (collapse) of the head water intake and the destruction of most of the capially constructed concrete main water intake and irrigation canal.

Table 12. *Forecast of income of the state enterprise of the Uzgen fish farm.*

No. p.p.	Types of income	2020 (plan)	2021 (plan)	2022 (plan)	2023 (plan)
1.	Income of the state enterprise of the Uzgen fish farm	395.0	455.0	532.0	954,?
2.	From the state budget	-	-	-	-

Income growth The State Enterprise of the Uzgen Fish Farm is forecasted on the basis of the draft decision of the Ministry of Agriculture, Food Industry and Land Reclamation of the Kyrgyz Republic to provide 50% of income to fish producers.

Table 13. *Forecast of expenses of the State Enterprise of the Uzgen Fish Farm.*

No. p.p.	Types of expenses	2020	2021 (plan)	2022 (plan)	2023 (plan)
1.	Administrative expenses	470.5	512.8	559.0	609.3.0
2.	Emergency expenses	-	-	-	-

According to table 13, the expenditure item of the State Enterprise of the Uzgen Fish Farm does not provide for financial resources for disaster risk reduction and adaptation to climate change.

Fishery, in the absence of funds to restore the head water intake and the main water intake and irrigation canal, built a temporary water intake and bypass canals of the irrigation type, which are constantly subject to destruction, erosion and silting.

No disaster risk reduction plan is being developed. There are no targeted measures to adapt to climate change.

Due to the lack of funds for actions for Civil Protection, DRR, Emergency Prevention, Bank protection works directly related to the fish farm are not planned or carried out.

The data for chapter I "Overview of agricultural sectors in the Don-Bulak Aiyl Aimak" was compiled according to the data of the Agricultural Development Department of the Uzgen District, the Don-Bulak Aiyl Okmotu and the working group on the development of a plan for disaster risk reduction and adaptation to climate change in the agricultural sector of the Don-Bulak Ayil aimak.

CHAPTER II. CHARACTERISTICS OF HAZARDS

The territory of the Don-Bulak Aiyl aimak is characterized by the intensive development of hazardous natural processes associated with geological and structural

features, relief, climatic and hydrogeological conditions, seismic activity, technogenic factors, etc.

2.1. Information about the natural disasters that have occurred on the territory of the Don-Bulak Aiyl aimak

Many settlements of the Don-Bulak Aiyl aimak are located along the river banks. Depending on the structure of the adjacent slopes and the water content of the rivers, residents of many villages are threatened by natural disasters.

In the catalog of emergency situations of the Ministry of Emergency Situations of the Kyrgyz Republic for 2000-2018¹³ within the territory of Don-Bulaksky Aiyl aimak registered 3 facts:

Table 14. *Catalog of emergency situations for 2000-2018*

Item No.	Emergency type	the date	Locality
1	Flooding	May 19, 2006	Chymbay
2	Mudflow	May 25, 2008	Chymbay
3	Mudflow	06/01/2008	Kara-Darya

Thus, according to Table 8, the following occurred on the territory of the Aiyl aimak:

- 2 mudflows;
- 1 flooding.

This catalog covers only emergencies that resulted in damage to settlements and infrastructure, while natural disasters that did not cause damage were not considered.

2.2. Dangerous processes and possible disasters in the territory of the Don-Bulak Aiyl aimak

According to the data of the Department of Monitoring, Forecasting of Emergencies of the Ministry of Emergency Situations of the Kyrgyz Republic, a list of objects where there are threats of disasters in the territory of the Don-Bulak Aiyl aimak has been determined.

Table 15. *The list of possible disasters on the territory of the Don-Bulak Aiyl aimak*

No. p.p.	Ail aimak	River	Locality	Potential targets
141	Den-Bulak	left side of the Yassy river	Dyon-Bulak village site Den-Bulak-2	145 residential buildings, farmland - 260 hectares
142	- "-	right side of the Kara-Darya river	Kara-Darya village (Fishery)	11 residential buildings, 15 hectares of farmland, irrigation canal
143	- "-	right side of the Kara-Darya river	Chymbay village	farmland - 360 hectares, residential buildings
144	- "-	left, right side of the Yassy river	Ozgyoryush village, Dubitel village	40 residential buildings, 35 hectares of farmland, dam
145	- "-	left side of the Yassy river	Zho-Alma land	the territory of the motordrome - 0.5 hectares

Table 15 shows social and cultural facilities and infrastructure for which there are threats of natural disasters, at the same time there are potential dangers in the sectors of agriculture,

¹³ Appendix 7. Catalog of emergency situations for 2000-2018.

forestry and water management, which will hinder the socio-economic development of the Aiyl aimak.

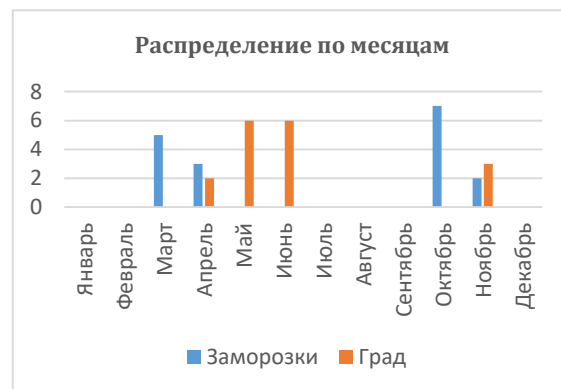
2.2.1. Dangerous meteorological phenomena.

The territory of the Aiyl aimak is characterized by a sufficient amount of precipitation (on average 1090 mm per year), moderately hot summers (average monthly temperature in July +20.5 degrees), mild winters (average monthly temperature in January -3.1 degrees).

The degree of danger of frost and hail for crop production was determined based on the analysis of Kyrgyzhydromet data (Figure 2)¹⁴

Freezing. During the period from 2009 to April 2020, 17 cases of frost were observed in the territory of Uzgen district, of which 4 cases of freezing in the air and 13 cases in the soil. When viewed in the context of months, frosts are observed in early spring (March) or late autumn (October), which poses little danger to flowering fruit trees and other agricultural crops

Hail. During the period from 2009 to April 2020, 7 cases of hail were registered on the territory of Uzgen district, of which light hail - 3, moderate hail - 3 and strong hail 1 time (05/30/2015). The duration of the hail is generally 1-2 minutes.



Based on the data of the Department of Agrarian Development of the Uzgen region¹⁵ about phenological phases of development of fruit trees and vegetables, and taking into account the period of hail fallout, their number and short duration, the degree of hazard of hail was determined as low.

Drought. Due to the lack of hydrometeorological observation stations on the territory of the Uzgen district, only global datasets of time frequency are available for drought hazard analysis. At the same time, the Uzgen district is considered as a single whole, and not in the context of Aiyl aimaks.

According to the reported data of the national expert agrometeorologist within the framework of the FAO project "Strengthening the capacity for disaster risk reduction and disaster preparedness in the agricultural sector of the Kyrgyz Republic", a moderate drought in the territory of the Uzgen district was observed in the period July-September 2014 and from July to September 2018¹⁶.

¹⁴ Appendix 12. Data of "Kyrgyzhydromet"

¹⁵ Appendix 13. Data from the Department of Agrarian Development of Uzgen District.

¹⁶ Appendix 15. Report of the National agrometeorological expert.

Given that due to climate change and intense melting of glaciers, the danger of drought in the future remains.

A project was implemented to create an artificial glacier based on the principle of a fountain in the Iiri-Suu pasture in order to adapt to climate change, to mitigate its consequences and conserve fresh water, the National Association of Pasture Users of Kyrgyzstan "Kyrgyz Zhaiyty" with the support of the Food and Agriculture Organization of the United Nations (FAO UNDP) within the framework of the project "Strengthening capacity for disaster risk reduction and preparedness for disasters in agricultural sector of the Kyrgyz Republic "in the period from May to November 2020.¹⁷



This is the construction of artificial glaciers - an engineering structure for carrying water from a natural source over a short distance in order to freeze it in an arid territory in the autumn-winter period and its further use in the spring-summer period. Artificial glaciers are created by freezing the flow of water in an upright position - thus, they resemble huge ice towers 30-50 meters high.

After a detailed discussion of the climatic and geographical features of the area and as a result of field inspections of several potential sites, a decision was made on creation of an artificial glacier on the principle of a fountain on the Iiri-Suu pasture.

The water intake was organized from the stream, on the Torgoy slope at 2643 meters above sea level, the distance from the water intake to the end point is 1600 meters (2480 meters above sea level). The elevation difference is 163 meters. In addition, to create an artificial glacier, the project envisages polyethylene pipes with a diameter of 63 mm and a length of 600 meters along the entire pipeline and a pipe with a diameter of 50 mm and a length of 512 meters at the end point of the artificial glacier, in order to create a high pressure of the incoming water, metal pipes with a diameter 50mm, 40mm and 20mm. When taking water from the Torgoy brook, a 1x1x1 meter concrete tank was built. At the site of the construction of the glacier, metal pipes are fixed with M-200 concrete pouring. The total height of the pipes is 14.5 meters.



¹⁷ Appendix 17. Data on the project of the National Association "Kyrgyz Zhaiyty"



This method of using artificial glaciers is one of the cheapest and easiest to implement methods of mitigating the effects of climate change in mountainous regions, confirmed by the experience of other countries and several pilot projects in Kyrgyzstan.

2.2.2. The spread of crop diseases¹⁸.

According to the Department of Agrarian Development of the Uzgen District, in the territory of the Don-Bulak Aiyl aimak in the period from 2015 to 2019, no cases of the spread of diseases of agricultural crops or an increase in the activity of plant pests were registered. The phytosanitary situation is stable, the degree of threat is low.

2.2.3. Infectious diseases among farm animals¹⁹

According to the data of the department of agrarian development of the Uzgen region, the epizootic situation is favorable in the territory of the Don-Bulak Aiyl aimak. Veterinary treatment of animals is regularly carried out, including diagnostic tests (except for laboratory tests), preventive vaccinations and other medical and preventive treatments for farm animals.

On the territory of Don-Bulak AA, there are two cases of burial of livestock killed by diseases:

1. Chon-Tash pasture, Kargash land, registered in 1943.
2. Don-Bulak village, Don-Bulak land- 2, registered in 1958.

The cattle burial grounds are officially registered, fenced and treated with hypocalcium chloride twice a year.

At this time, the construction of the Becker pit is underway at the Ak-Bulak site.

2.2.4. Geomorphological hazards²⁰

For the first time, based on the data obtained using the FAO Collect Earth and Earth Map tools for identifying geomorphological hazards for the territory of the Uzgen district with a grid of 200 meters, the hazards within the territory of the Don-Bulak Aiyl aimak were selected

¹⁸ Appendix 3. Data of the regional department of veterinary and phytosanitary inspection and the department of agrarian development of the Uzgen region.

¹⁹ Appendix 3. Data of the regional department of veterinary and phytosanitary inspection and the department of agrarian development of the Uzgen region.

²⁰ Appendix 9. Report on risks in the territory of Don-Bulak Aiyl aimak and exposure to natural disasters

and visualized, and a quantitative and percentage analysis was prepared. distribution of geomorphological hazards in the territory of the Don-Bulak Aiyl aimak (Table 16).

Table 16. *Quantitative and percentage indicators of the distribution of geomorphological hazards.*

Analyzed hazards	Total number	Percent, %
Collapse caused by lateral erosion	19	14.73
Floods in dry (valley) channels	10	7.75
Floods along the channels of a permanent watercourse	85	65.89
Landslides	5	3.88
Ravines and gullies	2	1.55
Slope mudflows	1	0.78
Valley mudflows	7	5.43

Analyzed geomorphological hazards for the study area are divided into three levels of danger: high, low, and medium (Table 17).²¹

Table 17. *Geomorphological hazards*

The analyzed Hazardous Natural Processes	Common quantity	High	Average	Low
Collapse caused by lateral erosion	19	7	10	2
Floods in dry (valley) channels	10	5	2	3
Floods along the channels of a permanent watercourse	85	9	20	56
Landslides	5	2	2	1
Ravines and gullies	2		2	
Slope mudflows	1			1
Valley mudflows	7		6	1

2.3. Potential losses from identified natural hazards in the agriculture, forestry and water sectors.

Based on analysis geomorphological hazards for the investigated territory of the Don-Bulak Aiyl aimak, the areas of agricultural land subject to hazardous natural phenomena were determined (Table 18).²²

Table 18. *Lands at risk of natural disasters.*

Lands at risk of natural disasters	Area at low risk grade in hectares		Area at medium risk zone in hectares		Area at high risk grade in hectares	
	Total	in %	Total	in %	Total	in %
Agricultural land total	1021.53	6.65	194.35	1,3	102.59	0.7

²¹ Appendix 6. Analysis of the distribution density and density of the weighted average sums of hazard gradation for the Don-Bulak Aiyl aimak.

²² Appendix 4. Cartographic analysis of impact zones and land categories at risk

Irrigated arable land	351.48	2,3	137.92	0.9	56.84	0,4
Pasture	499.44	3.2	11.46	0.07	0.00	0
Irrigated pastures	4.05	0.03	2.91	0.02	6.64	0.04
Shrubs	26.02	0.2	14.56	0.09	29.61	0.2
Gardens	93.98	0.6	18.98	0.1	7.15	0.05
The woods	11.19	0.07	5.60	0.04	2.22	0.01
Berries	35.37	0.02	2.93	0.02	0.12	0.0001
Water fund lands;	37.59	0.24	45.46	0.3	32.87	0.2
Fishery land	29.55	0.2	5.08	0.03	0.00	0
Forestry lands;	506.70	3.3	191.04	1.24	87.13	0.6
Other lands	19.67	0.1	69.69	0.5	137.06	0.9

As indicated in Table 18, agricultural lands are mainly at risk of natural disasters. According to the analysis of the data in Tables 17 and 18, the area of land falling within the zone with medium and high gradation of natural disaster risk is:

1. 21.8% of irrigated arable land;
2. 48.1% of gardens;
3. 9.7% of pastures;
4. About 20% of the forest of the Don-Bulak Aiyl aimak;
5. Up to 15% of the forest of the Uzgen forestry enterprise.

In cases of destruction of irrigation canals, as a result of the activation of mudflows, landslides, problems may arise in watering vegetable gardens and orchards. Given the importance of household plots and gardens in ensuring daily life, the population will take all possible measures to preserve the future harvest, including organizing manual irrigation. In this case, the main burden of manual irrigation will mainly fall on the shoulders of women and children.

In the case of activation of landslide and mudflow processes, their consequences will significantly affect the life support of the population of the Don-Bulak Aiyl aimak.

CHAPTER III.

AGRICULTURAL DISASTER RISK REDUCTION ACTIVITIES

Don-Bulak Aiyl Okmotu is subsidized, and the main part of the budget comes (up to 70%) from the republican budget. The dynamics of local incomes over the course of 5 years is projected at approximately the same level.

3.1. Financial resources of the Aiyl aimak

The revenue side of the local budget is formed from tax and non-tax revenues, as well as from grants from the republican budget. That is, the solution of the district's tasks largely depends on receipts from the republican budget.

Table 19. Forecast of local budget revenues for 2019-2023 (thousand soms) (according to the data of the Don-Bulak Aiyl Okmotu)...

Item No.	Types of income	2019 fact	2020 plan	2021 plan	2022 plan	2023 plan
1.	Tax revenues	12,432.9	14124.4	15539.8	15539.8	15539.8
2.	Non tax income	4 794.4	2979.3	5011.0	5211.0	5211.0
Total non-tax income		4 794.4	2979.3	5011.0	5211.0	5211.0
Total income		17,227.3	6604.5	20 550.8	20750.8	20750.8
15.	Equalizing grants	3 353.8	6 109.2	6,309.3	6,309.3	6,309.3
Total for Don-Bulaksky Aiyl okmotu		20 581.1	11850.1	26860.1	27060.1	27060.1

In the forecast plan for 2019-2023. it is planned to increase revenues to the local budget, excluding categorical and equalizing grants from 20 581.1 thousand soms to 27060.1 thousand soms in 2023 (Table 19.)

Table 20. Forecast of local budget expenditures for 2019-2023 (thousand soms) (according to the data of the Don-Bulak Aiyl Okmotu)

Item No.	Types of expenses	2019 approved expenses	2020 Indicative expenses	2021 Indicative expenses	2022 Indicative expenses	2023 Indicative expenses
1.	Administrative expenses	7385.3	7601.3	7722.3	7827.3	7827.3
2.	Other expenses, including:	2487.1	2487.1	2487.1	2035.9	2035.9
	- expenses for emergency situations	150.0	200.0	250.0	300.0	300.0
3.	Other expenses	4677.7	4677.7	4777.7	4877.7	4977.7
Total budget		14700.1	14966.1	15237.1	15040.9	15140.9

In the forecast plan for 2019-2023. it is planned to increase local budget expenditures for emergency situations and DRR from 150.0 thousand soms to 300.0 thousand soms in 2023 (Table 20.)

3.2. Disaster risk reduction activities in the Don-Bulak Aiyl aimak²³.

Based on the quantitative and percentage analysis of the types of geomorphological hazards (Table 16) and the frequency of their spread in the territory of the Don-Bulak Aiyl aimak and taking into account the forecast of revenues and expenditures of the local budget for 2019-2023, a plan for the implementation of the main measures was drawn up, taking into account three scenarios:

- emergency situations on the territory of the Aiyl aimak may not occur during the implementation of the measures
- one or two emergencies may occur during the implementation of the measures;
- emergency situations will occur regularly during the period of implementation of measures.

In order to implement these activities, it is planned to:

1. Non-structural activities:

- Informing the population about possible emergency situations. This event has a great importance for the protection of the population. At the same time, it is

²³ Appendix 16. Measures to prevent, mitigate the consequences of emergency situations

necessary to take into account the part of the population outside the areas of mobile communication and in remote areas (livestock breeders on summer pastures, leshoz tenants), including women and children.

- Education of the population on preparation and response to emergencies. At the same time, it is necessary to pay attention to the issues of active participation of women, children and pensioners, since they make up about 67% of the total population.
- Trainings on notification of possible emergency situations. When organizing trainings, it is necessary to take measures to widen coverage of the population, including the most vulnerable parts - women, children and pensioners, especially those located far from their permanent place of residence (summer pastures, forestry enterprises).

2. Structural measures:

- Dam construction;
- Spur construction;
- Cleaning channels.
- Strengthening dangerous landslide slopes.

The structural measures will be financed from the state and local budgets, donor funds, in accordance with the socio-economic development plan for 2018-2023.

Scenario 1. There may be no emergency situations on the territory of the Aiyl aimak during the period of implementation of measures.

This section provides descriptions of the planned structural measures to prevent, mitigate the consequences of emergencies within the framework of the Strategic Plan for Socio-Economic Development of Don-Bulak Aiyl District for 2018-2023. (Appendix 2. Strategic plan of socio-economic development of Don-Bulak Aiyl District for 2018-2023).

The list of measures is determined on the basis of the list of possible disasters on the territory of the Don-Bulak Aiyl aimak (Table 14), by priority, taking into account the danger posed to the population, economic and infrastructure facilities and the budgetary possibilities of the Don-Bulak Aiyl aimak.

Scenario 2. One or two emergencies may occur during the implementation period.

If the process develops according to this scenario, funds from the local budget will be directed to eliminate the consequences of disasters, but the implementation of the planned activities will continue in a truncated version, which is highlighted in blue in Table 14.

Scenario 3. During the period of implementation of measures, emergency situations will arise regularly.

According to this scenario, all funds of the Aiyl aimak will be directed to liquidation of the consequences of emergencies. It is assumed that the construction of facilities financed from the republican budget will be temporarily suspended; material and financial resources will be redirected to ensure measures to restore the damaged facilities.

Table 21. Measures to prevent, mitigate the consequences of emergency situations (according to the data of the working group on the development of a plan for disaster risk reduction and adaptation to climate change in the agricultural sector Don-Bulak Aiyl aimak.

No. p.p.	Object name	total cost	Source of financing	Allocated funds	Implementation period				
					2020	2021	2022	2023	2024
1.	Construction of a 200 m dam on the Zhazy River in the village of Don-Bulak-2	1,360,000	Local budget	Labor Contribution of AO	20,000				
			Gov. budget (MES KR)	Gabion nets, fuels and lubricants, equipment	1,260,000				
			Investments, grants	Money / products for work	80,000				
2.	Construction of a 200 m dam on the Zhazy river in the village of Zho-Alma	1,360,000	Local budget	AO contribution in the form of labor,			20,000		
			Gov. budget (MES KR)	Gabion nets, fuels and lubricants, equipment			1,260,000		
			Investments, grants	Money / products for work			80,000		
3.	Construction of a 200 m. Dam in the Ozgorush village.	1,360,000	Local budget	AO contribution in the form of labor,					20,000
			Gov. budget (MES KR)	Gabion nets. Fuels and lubricants, equipment					1,260,000
			Investments, grants	Money / products for work					80,000
4.	Construction of a 200 m. Dam in the Chymbay village.	1,360,000	Local budget	AO contribution in the form of labor,				20,000	
			Gov. budget (MES KR)	Gabion nets. Fuels and lubricants				1,260,000	
			Investments, grants	Money / products for work				80,000	
5.	Mechanical peeling of MHK Kara-Kya	160,000	Local budget	Fuels and lubricants	15000				
			Gov. budget (MES KR)	Engineering technology	145000				
6.	Construction of a 200 m. Dam in the village. Kara-Darya	1,280,000	Local budget	AO contribution in the terms of labor		20,000			
			Gov. budget (MES KR)	Gabion nets. Fuels and lubricants, equipment		1,260,000			
8.	Mechanic peeling of the Charbak canal in the village of Toolos	130,000	Local budget	Technique, fuels and lubricants			130,000		

The implementation of measures to prevent, mitigate the consequences of emergencies will allow the protection of residential buildings, irrigation canals, household plots, bridges and highways and, in turn, has the ability to ensure the sustainability of measures to introduce innovative agricultural methods, including drip irrigation, which are aimed at reducing burden on women and older children.

CHAPTER IV. CONTROL OF MEASURES AND ADJUSTMENT OF THE RISK REDUCTION PLAN DISASTER AND ADAPTATION TO CLIMATE CHANGE IN AYIL AYMAK

4.1. Monitoring the implementation of the activities of the DRR and ACC plan.

Control over the implementation of the activities of the DRR and ACC plan is carried out through authorized representatives of the leadership of the Aiyl Okmotu, the local Kenesh, and the Ministry of Emergencies of the Kyrgyz Republic.

Control is carried out through practical inspections, requesting reports or hearing the responsible persons at a meeting of the Aiyl Okmotu, local Kenesh, during scheduled inspections in preparation for the spring-summer period or during the Civil Protection exercise.

The main objectives are:

- ◆ identification of achievements and gaps in the implementation of activities;
- ◆ ensuring timely implementation of activities;
- ◆ providing practical support in the implementation of activities.

Outcome indicators are quantitative and / or qualitative criteria that provide a simple and reliable means of measuring achievement or reflecting changes associated with stated outcomes.

The basic indicators of the implementation of the activities of the DRR and ACC plan are:

1. ***The timing of the activities.*** Control over compliance with the deadlines for the implementation of measures is carried out through periodic checks at the most significant moments of work - at the beginning of work, in the middle and at the stage of completion of the construction of the facility. The results of this indicator are progress reports at the time of the audit, indicating, if any, deficiencies.
2. ***The quality of the work performed.*** This indicator is important in the implementation of the activities of the DRR and ACC plan. Control over this indicator is carried out through periodic checks during construction and other works. Performance reports are result.
3. ***The written results.*** Control over this indicator is carried out by checking the reports of the performers. The results are acts or protocols of inspections with conclusions and recommendations. Based on the results of control measures for the implementation of the plan, an act is drawn up and transferred to the relevant managers for taking measures to eliminate the identified deficiencies.

4.2. Correction of the plan of the DRR and ACC.

The plan is adjusted as needed, but at least once a year. The action plan is adjusted according to the results:

- ◆ Of changes and additions to the regulatory legal acts that determine the life of the Aiyl aimak (administrative division, land resources, etc.);
- ◆ Of implementation of planned activities;
- ◆ Of changes and additions to the budget of the Aiyl aimak;
- ◆ Of surveys by specialists from competent institutions and organizations;
- ◆ Of practices and trainings;
- ◆ When there is a threat and directly in the process of emergency response.

In this case, an entry is made in the correction sheet about the date and the official who carried out the correction, in the future all the corrections made must be approved by the decision of the local Kenesh.

APPENDICES (list is not exhaustive)

Annex 1. Regulatory framework for disaster risk reduction and adaptation to climate change.

https://drive.google.com/drive/folders/1pcbfXEYRVrAE2Bj-bcB56YGF_upSm-Dn?usp=sharing

This appendix presents the legislative acts of the Kyrgyz Republic that regulate the activities of authorized state and local authorities, the population on disaster risk reduction and adaptation to climate change in the agricultural sector.

Appendix 2. Strategic plan for social and economic development of Don-Bulak Aiyl District for 2018-2023.

<https://drive.google.com/file/d/1w4iZVEFdrLGC4jS6lreaP0MLtzK1KYLm/view?usp=sharing>

The strategic plan for the development of the Don-Bulak Aiyl aimak is a document that reflects the main directions and nature of the district's development for the period 2018-2023. The plan is a complex system of target guidelines for the development of the social sphere, economy, environment, public institutions of the district, as well as a system of effective ways, methods of achieving them, interconnected with the main resources.

Appendix 3. Data of the regional department of veterinary and phytosanitary inspection and the department of agrarian development of the Uzgen region.

<https://drive.google.com/drive/folders/1nyU4Z0KCbke6j2DLWo1Iz7vYstYGgK?usp=sharing>

This document reflects the veterinary and phytosanitary situation on the territory of the Uzgen district, including the Don-Bulak Aiyl aimak and the measures taken to prevent diseases of livestock and protect against the spread of harmful organisms for plants and plant products, to improve the environment.

Appendix 4. Cartographic analysis of the prevalence of hazardous natural processes and by categories of land in the Don-Bulak Aiyl Aiyl aimak.

https://drive.google.com/file/d/1RacY2bH8L-cYG_bGnmiR5fxBGolhVFe/view?usp=sharing

This appendix reflects the results of a quantitative and percentage analysis of the distribution of geomorphological hazards on the territory of the Don-Bulak Aiyl aimak, which was first carried out by GIS specialists of the project on the basis of the data obtained using the FAO Collect Earth and Earth Map tools to identify geomorphological hazards for the territory of the Uzgen region with a grid of 200 meters.

Appendix 5. Cartographic analysis of the risk of natural disasters with the calculated impact zones and land categories at risk.

https://drive.google.com/file/d/1RacY2bH8L-cYG_bGnmiR5fxBGolhVFe/view?usp=sharing

This document presents the results of a spatial analysis of the risk of natural disasters with an indication of the impact zones, calculated on the basis of the performed mathematical analysis and the category of lands in accordance with the data of Kyrgyzgiprozem, located in the risk zone in the territory Don-Bulaksky Ayil aimak.

Appendix 6. Analysis of the distribution density and density of the weighted average sums of hazard gradation for the Don-Bulak Aiyl aimak.

<https://drive.google.com/file/d/1zJAi3RLXxtbKWdF2xu6mBG4wv5eXzdk/view?usp=sharing>

In this appendix, the areas of agricultural land are indicated, divided into three levels of risk: high, low, and medium. These levels were determined based on the analysis of geomorphological hazards for the studied territory of the Don-Bulak Aiyl aimak, taking into account the type of geological hazards, their distribution zone, age / activity status and the distance to the nearest infrastructure / housing facility.

Appendix 7. 2000-2018 emergency situations catalog.

<https://drive.google.com/drive/folders/15OZnnGNJwShPr-4MHiBqI5lTHvpWtcur?usp=sharing>

The catalog contains emergency situations that occurred on the territory of the Don-Bulak Aiyl aimak for 2000-2018, indicating data at the scene, characteristics of the disaster and victims of the disaster.

Appendix 8. Reference data on the Don-Bulak Aiyl aimak.

https://drive.google.com/drive/folders/1l9sTXWGUTHDUg5ZzXkMaiII0zXYR9Q_z?usp=sharing

This appendix contains reference data prepared by the group for the development of the DRR plan and the ACC of the Don-Bulak Aiyl aimak, which include: demographic data, information on the area of agricultural land, the structure of cultivated areas, crop and livestock production.

Appendix 9. Report on risks in the territory of Don-Bulak Aiyl aimak and exposure to natural disasters.

<https://drive.google.com/file/d/1F6A bhAe4x4BtJ4l6APpIujumadbj3R1 / view?usp = sharing>

Appendix 10. Pasture data Don-Bulaksky Ayil aimak.

Document prepared Don-Bulaksky Aiyl okmotu together with the committee of pasture users and contains information on pastures, the number of livestock in pastures.

Appendix 11. Data on Uzgen forestry.

https://drive.google.com/drive/folders/1Ugl5mWzfXQwhctoij32XS7XCZL0R8h_v?usp=sharing

The data was prepared by the Uzgen forestry enterprise and contains information on the area of forestry located on the administrative boundary line of Don-Bulaksky Aiyl aimak, forest characteristics, data on the number of tenants of forest areas.

Appendix 12. Data on Uzgen fish farm.

<https://drive.google.com/file/d/1Vwxrxuw2Jc3IVzjvIFAsBxVoEbTYZlQK/view?usp=sharing>

The data were prepared by the State Enterprise Uzgen Fish Farm and contain information on the area of the fish farm located on, production characteristics, data on the financial condition of the fish farm.

Appendix 13. Data from Kyrgyzhydromet.

<https://drive.google.com/drive/folders/15moX4jrX0nhgdWLKsiwJSQl3w18rHPAf?usp=sharing>

This appendix "Kyrgyzhydromet" reflects information on the time of occurrence and the number of frosts and hail for the period from 2009 to 2020 in the territory of Uzgen district.

Appendix 14. Data from the Department of Agrarian Development of the Uzgen region.

<https://drive.google.com/drive/folders/1OqLBhyAukiSyC6RZEvorR0tN1HveP2kx?usp=sharing>

The Department of Agrarian Development of the Uzgen District prepared data on phenological phases for fruit trees and vegetables. These data allow us to determine the degree of danger of frost and hail.

Appendix 15. Report of the National agrometeorological expert.

<https://drive.google.com/drive/folders/10pGyxDr4t-HbZw8-wYYlbL7Wa9gjOhlt?usp=sharing>

In the report of the national expert-agrometeorologist 'The Food and Agriculture Organization of the United Nations in Kyrgyzstan' analyzed the existing hydrometeorological hazards in the agricultural sector and the system for collecting, transferring, analyzing and presenting data on hydrometeorological hazards for the agricultural sectors of the Kyrgyz Republic, including the Uzgen district.

Due to the lack of hydrometeorological stations on the territory Don-Bulaksky Aiyl aimak, data on the Uzgen region were used to determine the degree of danger of drought

Appendix 16. Actions to prevent, mitigate the consequences of emergency situations.

https://drive.google.com/file/d/103_csD5umoiY-n7GtUpqAcnZq164nmVp/view?usp=sharing

This appendix defines activities for the prevention, mitigation of the consequences of emergencies for the period from 2020 to 2024, indicating the sequence of implementation and sources of funding for measures for three possible scenarios for the development of emergencies in the territory Don-Bulaksky Ayil aimak.

Appendix 17. Activities of the National Association "Kyrgyz Zhaiyty" within the framework of the project "Strengthening capacity for disaster risk reduction and disaster preparedness in the agricultural sector."

https://drive.google.com/file/d/1SvQV8nqeg8QDTioTi4KNiI_9CrilmWv_/view?usp=sharing

This annex reflects activities of National Association "Kyrgyz Zhaiyty", within the framework of the project "Strengthening the capacity for disaster risk reduction and disaster preparedness in the agricultural sector" creation of an artificial glacier based on fountain on the Iiri-Suu pasture.

Chief Specialist for Emergency Situations

Matosmonov F.

Correcting form
of the plan for disaster risk reduction and adaptation to climate change in the
agricultural sectors of Salam - Alik Aiyl aimak

Date	FULL NAME, corrections	Sections where the corrections were made	Signature