Executive Summary

Landscape sand dunes Repetek. S. Schmidt

States Parties

Republic of Kazakhstan, Turkmenistan, Republic of Uzbekistan

State, Province or Region

The State, Province or Region of each component part is given in the table below *(table 1)*.

Name of Property

Cold Winter Deserts of Turan

Geographical coordinates to the nearest second

This transnational serial nomination encompasses 15 components in 7 protected areas in the territory of the three states parties Kazakhstan, Turkmenistan, and Uzbekistan.

There are several protected areas which have more than one component part within their boundaries. Component parts within the same protected area, and therefore under the same management, can reasonably be grouped as clusters due to particularly strong linkages. In such cases, the name of the cluster encompasses several individual components.

Having said this, the nominated serial property consists of four clusters (Altyn-Emel, Barsakelmes, East Garagum, Northern Ustyurt), and three individual components (Bereketli Garagum, Gaplangyr, Southern Ustyurt).

To avoid unnecessary repetiton in the description of site conditions, management, and legal background, component parts within the same protected area are described on a cluster level. The table 1 shows the size and coordinates for each of the component parts within the cluster.

Table 1: Geographical coordinates to the nearest second of the components of the nominated property Cold Winter Deserts of Turan

ID	Name of the component	State Party	Name of the cluster	Region / District	Coordinates of the Central Point	Area of nominated component of the property (ha)	Area of the buffer zone (ha)
01	Altyn-Emel East	Kazakhstan	Altyn-Emel	Almaty Region, Kerbulak District, Panfilov District	44°01′33″N 79°02′03″E	13,019	255,684
02	Altyn-Emel Central			Almaty Region, Kerbulak District, Panfilov District	43°53′37″N 78°39′21″E	5,644	
03	Altyn-Emel West			Almaty Region, Kerbulak District, Panfilov District	43°59′07″N 78°18′15″E	33,306	
04	Barsakelmes island	Kazakhstan	Barsakelmes	Aral Region, Kyzylorda Province	45°39′14″N 59°56′14″E	50,884	19,639
05	Kaskakulan			Aral Region, Kyzylorda Province	45°42′57″N 61°01′47″E	109,942	26,670
06	Delta			Aral Region, Kyzylorda Province	46°07′27″N 60°50′27″E	2,300	5,851
07	Bereketli Garagum	Turkmenistan		Ahal Province	39°36′22″N 59°39′39″E	87,400	30,745
08	Gaplangyr	Turkmenistan		Dashoguz Province	41°34′27″N 57°29′10″E	926.203	22,950
09	Repetek	Turkmenistan	East Garagum	Lebap Province	38°36′06"N 63°15′01"E	34,600	47,324
10	Yeradzhi			Lebap Province	38°47′06″N 62°30′16″E	30,000	—
11	Saigachy	Uzbekistan	Northern Ustyurt	Republic of Karakalpakstan	45°09′02″N 57°43′45″E	575,335	219,800
12	Saigachy-Beleuli			Republic of Karakalpakstan	44°33′47″N 57°13′09″E	21,765	
13	Saigachy-Duana			Republic of Karakalpakstan	45°20′06″N 58°27′05″E	23,454	
14	Saigachy-Zhideyli			Republic of Karakalpakstan	44°58′00″ N 58°15′04″ E	7,746	
15	Southern Ustyurt	Uzbekistan		Republic of Karakalpakstan	42°04′53″N 56°39′53″E	1,447,143	—
						3,368,741	**628,663**

Textual description of the boundaries of the nominated property

Altyn-Emel cluster

The component cluster, consisting of three components, is located in the South-East of Kazakhstan in the central part of the Ili intermountain basin. In the North, it is framed by the Aktau mountain range. In the South, the natural boundary of the component cluster is the Ili River and the Kapchagai reservoir.

- **Altyn-Emel East component (ID 01)**

The component part Altyn-Emel East starts 9 km west of the village Kalamakkara. The border follows along the southern border of the montane zone in mountaineaus landscape approximately the 920 m isoline in westward direction. After about 15 km it follows a ravine escarpment by raising to isolines between 1,000-1,100 m. Leaving the escarpment southwards at an altitude of about 800 m the border is following respective isolines between 700-800 m around a peak first, eastwards, then northwards and finally westwards. From here it goes eastwards a long a steep ravine for about 8 km, where the altitudes are levelling to a wider plain at a hight of 1,100 m. From here the border follows for about 13 km further eastwards undulating over shallow ridges and valleys between 1,100 m and 1,200 m where it finally ends up in the beginning of the border line.

- **Altyn-Emel Central component (ID 02)**

The component part Altyn-Emel Central is circulating around an isolated inselberg at altitudes between 650 m to 750 m at the transition from steep slopes to the debris fens. The most eastern margin of the component part is located 2 km north of the singing dunes.

- **Altyn-Emel West component (ID 03)**

The component part Altyn-Emel West starts its border in the eastern part about 1.6 km west of the village Mynbulak. It follows slowly in northeastern direction the slightly rising altitudes of the debris fen, that declines southwards towards the Ili river, from an altitude of 650 m until 1,200 m at a distance of 17 km. From here the inclination increases considerably to an altitude of 1,800 m. The border follows now southwestwards along the mountain ridge for about 13 km. Here the border turns southwards down the steep mountains along a revinve from 1,650 m to 900 m and further the debris fen towards the Ili river to an altitude of 550 m at a distance of 6 km. From here the border turns to the west along the isoline between 550 and 510 m parallel to the Ili river for a distance of about 20 km. From here the border turns north back to the starting point for about 8 km passing by the Kysty-Kalkan mountain peak at the right hand side.

Barsakelmes cluster

The Barsakelmes cluster is located southernly adjacent to the northern part of Aral Sea within the Aralkum. It consists of three components:

- **Barsakelmes island component (ID 04)**

The Barsakelmes island is an isolated inselberg within the Aralkum desert. It has a steep cliff circular surrounding the entire component part that used to be the shoreline when the Aral Sea used to be a marine

ecosystem. The northwestern and southwestern part of the component part both indicate the historic flow direction of the Aral Sea around the island. Both show a typical spit formatin, while at the eastern part of the component part the ablation is located. There are no further geomorphological features appropriate to specify the location.

- **Kaskakulan component (ID 05)**

The northern border of the Kaskakulan component part is located 5 km south of the village Karateren. It goes east for about 10 km crossing a wetland, feeded by a tributary of Syr Darya. Further there is a segement of about 20 km crossing desertified, salinized areas of the Aralkum advancing to the premisses of village Bozkol, that is still about 12 km of distance to the component parts' border. The border goes from there 5 km to the west and makes a 90° turn southwards following a line for 15 km through plain desert territories. From here it goes 13 km southwest and another about 20 km west, all through desert areas while crossing a dried up limnic shallow ravine. Further the border turns northeast for 10 km and turns northwards for about 13 km, crossing a large sandy area northeastwards for about 18 km. From there it turns again 90° northwestwards for about 15 km and finally turning westwards to the premises of the village Karateren.

- **Delta component (ID 06)**

The Delta component part starts from one of the major tributaries of the Syr Darya delta into the northern Aral Sea. It goes southwestwards for about 1,5 km to the edge of the Kokaral Dam, that prevents the loss of water from northern Aral Sea into the southern Aral Sea. The component parts' border turns northwest for about 7 km crossing aquatic ecosystem and turns northeast in an almost 90° turn for another 4 km through aquatic ecosystem as well. From here the border goes straight west for 3,7 km to the alluvial fen of the Syr Darya turns south for 1,4 km to the Syr Darya tributary itself and follows the recent meander until the starting point of the component part.

Bereketli Garagum component (ID 07)

The Bereketli Garagum component is located in the Central Karakum desert, 240 km from the capital of Ashgabat, in Akbugday and Tejen Districts of Akhal Province.

The western part of the component is located 80 km east of the Ichoguz (former Derveze) railway station, on the territory of Derveze and Akbugday Districts. It has the form of an irregular quadrangle up to 30 km long, stretching from the eastern side of the Unguz depression to the latitude of the village of Bovrideshik, near the meridian of the triangulation point marking the altitude of 165 m a.s.l.. The northern border is formed by the salty areas of the Unguz depression – remains of the ancient riverbed of the Amudarya. The area belongs to the Cis-Unguz part of the Karakum desert.

A strip of 2-8 km wide, stretching from west to east and including a series of Unguz depressions, connects the western part of the component with the eastern part, which is located in the Trans-Unguz Karakum, on the territory of Tejen District, 40 km south-east of the village of Murzechyrla and 60 km east of the first section.

Gaplangyr component (ID 08)

The Gaplangyr component is located in the south-eastern margins of the Ustyurt plateau, in the area where the Trans-Uzboy folded region contacts with the Trans-Unguz Karakum desert and occupies the north-western part of the Gaplangyr plateau. The highest point (302 m a.s.l) is located on the cliffs (chink) of Gaplangyr, to the east of the Goklenguyy well; the lowest point (45 m a.s.l.) is situated in the Charyshly area. The territory of the component is located in the north-western part of Turkmenistan, on the lands of the Boldumsaz and Gubadag Districts of Dashoguz Province. To the north and west, the component borders the Republic of Uzbekistan. The southern and eastern borders of Gaplangyr component are located in Gubadag and Boldumsaz Districts.

East Garagum cluster

The cluster, consists of two components. It is located in the southern subzone of the Karakum desert, 70 km south-west of Turkmenabad, the administrative centre of Lebap Province, and the Amudarya valley, near the Repetek railway station.

- **Repetek component (ID 09)**

In the east, the boundary of the component is occupying a part of the Eastern Karakum desert. In the south-west it is outlined by the Uch-Ajin Neogene sky islands. In the west and north it goes along the Upper Quaternary delta of the Murgab, the Unguz depression and the Trans-Unguz Karakum desert. The component stretches 28 km from north to south and 26 km from east to west. The boundaries of the component are geometric straight lines.

- **Yeradzhi component (ID 10)**

The Yeradzhi component is situated 70 km northwest of the Repetek component. The northern boundary of the component is a straight line between the Dertkuduk and Galp wells, the western border – a straight line between the Razybay and Yeradzhi wells, the eastern boundary – between the Aman and Kapakly wells. In contrast, the southern border is formed by a straight line between the 200 m altitude in the west and 192 m in the east.

Northern Ustyurt cluster

The cluster is located in Muynak and Kungrad Districts of the Republic of Karakalpakstan, on the Ustyurt Plateau in the north of Karakalpakstan. It consists of two component parts.

- **Saigachy component (ID 11)**

It occupies an elevated plain, the eastern portion of which overlaps the northern Ustyurt depression, but its largest part covers the Kassarma elevation. In the north the component borders on the Republic of Kazakhstan, in the east it is bounded by the eastern chink of Ustyurt and the western shore of the Aral Sea (including the Zhideyli component), the southern border runs between the Karazhol and Karabilge areas, and the western border runs along the solonchaks of the Ustyurt depression.

- **Saigachy-Beleuli component (ID 12)**

The Saigachy-Beleuli component is located 20 km to the south, on ruins with the same name. It is a rectangle with the width ca. 13.5 km and length ca. 21 km, the borders of the component could be defined to the dirt roads, connected to ruins Beleuli.

The ruins of caravanserai Beleuli are located near the last south-west point of the site on the dirt road, which goes to the north. The western border goes along the road for 13.5 km. A railroad, which goes 22-25 km further to the west, is the clear landmark. The northern border of the component goes perpendicular to the dirt road, after 13.5 km from the ruins, (21.2 km). The eastern border goes also for 13.4 km along the dirt road. The southern border (21 km) has a wide angle in the middle because of the dirt roads and has direction towards to the ruins.

- **Saigachy-Duana component (ID 13)**

Duana component is located in the northern Uzbek part of the Eastern Chink of Ustyurt and is situated east of the main part of the Saigachy component. Its northern boundary goeas along the state border with Kazakhstan and its southern boundary ends north of the Aktumsyk ruins, not reaching the ruins. The Duana component includes the edge of the plain plateau, where the chink begins, which is the western boundary of the section. The Aral Sea shore is the eastern boundary. The highest point of the Chink is 160 m high (190 m a.s.l. the highest point of the Chink and 30 m a.s.l. the shoreline).

- **Saigachy-Zhideyli component (ID 14)**

This Zhideyli component is similar to the Duana component, but south to it. Its northern boundary begins south of the Aktumsyk ruins, while the southern boundary ends about 1.5 km after the Akbulak spring. The length from north to south is 25 km. The eastern and western boundaries coincide with the natural boundaries of the Chink and the Aral Sea shoreline respectively. The chink in the southern part of the component achieves, about 200 m altitude a.s.l..

Southern Ustyurt component (ID 15)

Southern Ustyurt component is located in the Kungrad district of the autonomous Republic of Karakalpakstan. Western and southern borders of the component coincide with the state border with the Republic of Kazakhstan and Turkmenistan, respectively. The northern boundary conditionally passes along the line 41.5° parallel of northern latitude, runs along the northern boundary of Assake-Audan depression, also comprising Shorzha hollow to the north of Sarykamysh depression. The eastern border passes along the conditional line from the Shorzha Depression to the Eastern Chink at the border with Turkmenistan at the eastern shore of Lake Sarykamysh.

Map of the nominated property, showing boundaries and buffer zone

Map 1 gives an overview on the location of the fifteen components in the Turan region. Detailed maps of all component parts and their buffer zones are provided in chapter 1.e of the dossier, in Annex A, and as hard copies in larger format.

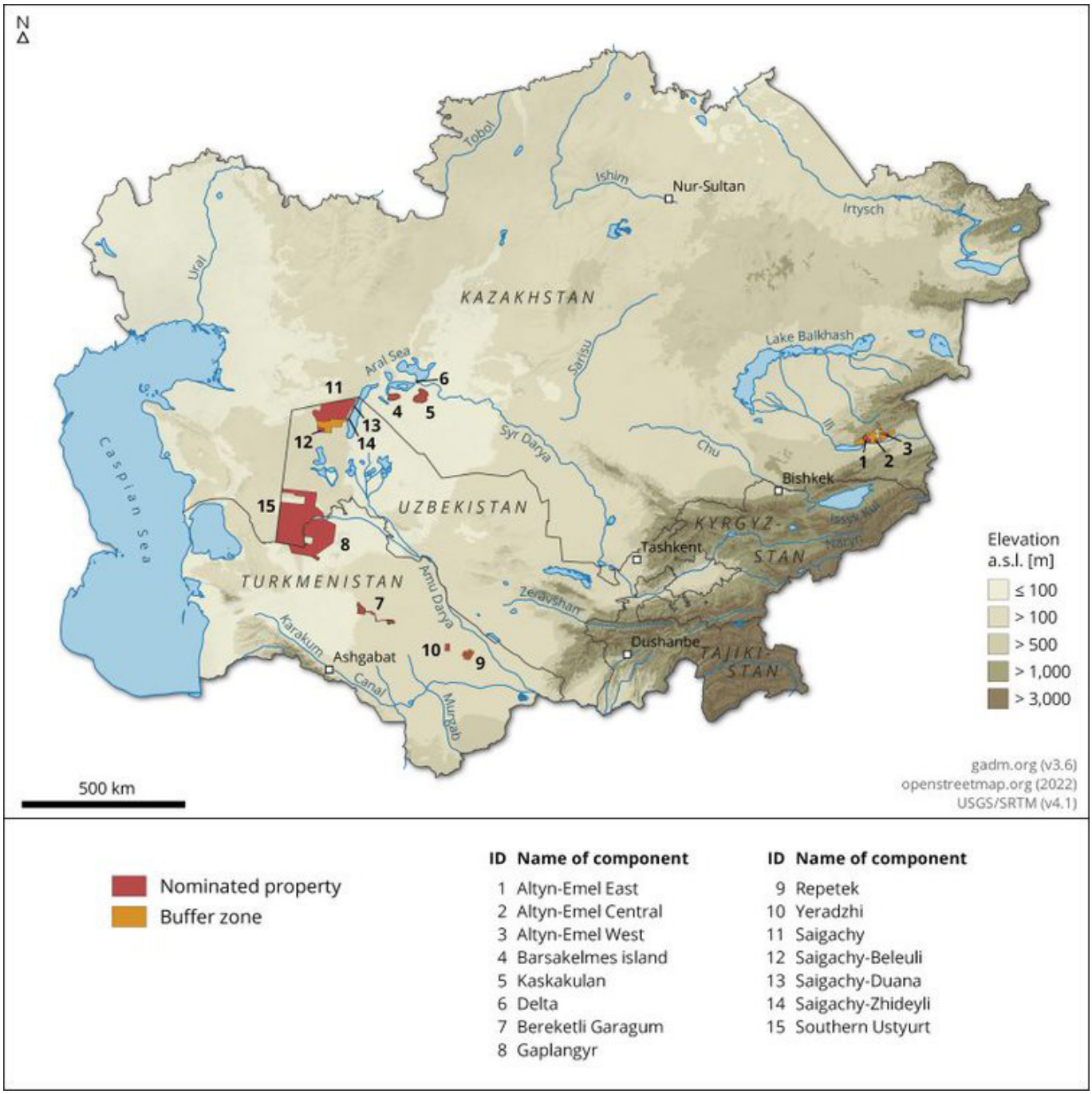

Figure 1: Overview of the component parts of the nominated property Cold Winter Deserts of Turan

Criteria under which property is nominated

(ix), (x)

Draft Statement of Outstanding Universal Value

a) Brief synthesis

The Cold Winter Deserts of Turan represent the biome of cold winter deserts, which is distributed in arid areas of the temperate zone. The ecosystems of this biome reflect the extreme climate conditions,

characterized by very low precipitation and cold in winter period, strong dryness and hot in summer. The Cold Winter Deserts of Turan represent the diversity of desert ecosystems in their evolution, ecosystem functions and natural dynamic, as well as the species diversity of special adapted desert flora and fauna.

They are a transnational serial property situated in Kazakhstan, Turkmenistan, and Uzbekistan. They are a series of fifteen component parts (4 clusters + 3 single components), which are located in different parts of the extensive Turan region between the Caspian Sea and Turanian high mountains system.

Each of the nominated component parts has its own specifics, and at the same time, they complement each other in terms of biodiversity, desert types, and ongoing ecological processes.

The temperate deserts are the only biome worldwide without a single property on the World Heritage site list. This nomination shall close this gap.

b) Justification for Criteria

Criterion (ix)

The proposed serial property represent the cold winter deserts as an outstanding example of evolution and adaptation of terrestrial ecosystems to extreme climate conditions and of the development of survival strategies of plants and animals as ongoing ecological and biological processes. The selected series includes diverse geomorphological desert types, which are reflected by different ecosystems, such as saxaul woodland, sagebrush, saltwort, psammophytic and solonchak deserts. Taxonomic diversification and morphological convergence of plants are significant ongoing biological processes. Primary successions on virgin land of previous sea bottom are ongoing ecological processes of colonizing hostile land areas. Saxaul woodland demonstrates the ability of desert ecosystems for ongoing carbon sequestration and storage. Morphological, physiological and behavioral adaptations ensure survival of animal life, and seasonal migrations of large mammals are a fundamental ongoing process within the cold winter deserts of Turan.

Criterion (x)

The cold winter deserts of Turan include diversity hotspots of Chenopodiaceae and plant genera of different families like *Artemisia, Calligonum, Salsola, Zygophyllum* or *Limonium* including high share of endemic species. The serial hosts very specific flora and fauna. The cold winter deserts of Turan are the habitat of few global threatened mammals like kulan *(Equus hemionus kulan)*, goitered gazelle *(Gazella subgutturosa)*, saiga antelope *(Saiga tatarica)* and urial *(Ovis vignei arkal)*. They host numerous breeding birds, and contain important resting places of migrating bird species. The herpetofauna and insect fauna of the cold winter deserts is characterized by very specific representatives.

c) Statement of Integrity

The nominated component parts have been selected on a careful regional analysis. They include the most intact examples of desert ecosystems, which are mainly for long time under strict protection regime in strict nature reserves. They cover in total a huge area of about 3.4 million hectares. The ecosystems fulfil their ecological functions, and host the characteristic plant and animal diversity of cold winter deserts. They are not damaged by human activities.

d) Statement of authenticity for properties nominated under criteria (i) to (vi)

Not relevant as this property is nominated under criteria (ix) and (x).

e) Requirements for protection and management

All proposed component parts are protected by the national legislation of the three countries and managed on the base of specific management plans by state administrations in responsibility of the relevant ministries. Few of them were established already in Soviet times and have a long tradition in scientific based nature protection. Prior management objective in all proposed component parts in the three countries is to ensure the ecosystem functionality of desert landscapes including their biological diversity of plants and animals. The joint management will be realized by a Joint Steering Committee (JSC) with responsible representatives of all three Stateы Parties on the base of a Memorandum of Understanding. The joint management is to be implemented by regular JSC meetings, by comparing the individual and national management plans, by staff exchange, joint public awareness campaigns and permanent environmental education.

Name and contact information of official local institution/ agency

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