**Additional material**

**4.1 Ecological character**

The following areas are distinguished within the site in accordance with their ecological features:

1. The Veselovskoye Reservoir is a desalinated water body, 100 km long, 1-4 km wide. The shore is mainly steep although the top parts of bays and the mouths of streams have gently sloping banks with salty soils. As a result of the change in salinity of the water there was a change in the flora. The number of species increased three times. Now, about 30 species of water plants are found in the reservoir, including *Phragmites australis, Bulboschoenus maritimus, Typha angustifolia, T.latifolia, Scirpus lacustris, Potamogeton crispus, P.perfoliatus, P.pectinatus, Zannichellia, Myriophyllum, Ceratophyllum, Najas, Poligonum, Lemna minor* and *Cladophora* sp. In the first years after desalination, *Chara, Myriophyllum* and *Potamogeton* sp. disappeared. Later, they reappeared in shallow brackish limans. Reed *Phragmites* turned to be the most tolerant to the changes: it only moved toward the new shore and developed a littoral belt. Before desalination, the phytoplankton composition numbered 123 species. This number reduced to 42 in the first years after the water diversion, and then increased again to 87 (Kruglova, 1962).

Reedbeds and bays provide habitats for lake frog *Rana ridibunda*, European terrapin *Emys orbicularis*, grass snake *Natrix natrix* and water snake *Natrix tesselata*. Breeding birds include great- crested grebe *Podiceps cristatus*, red-necked grebe *Podiceps griseigena*, coot *Fulica atra*, greylag goose *Anser anser*, mallard *Anas platyrhynchos*, pochard *Aythya ferina*, red-crested pochard *Netta rufina*, marsh-harrier *Circus aeruginosus*, six species of herons, bitterns, glossy ibis *Plegadis falcinellus*, spoonbill *Platalea leucorodia*, herring gull *Larus argentatus*, common tern *Sterna hirundo*, little

tern *S.albifrons*, whiskered tern *Chlidonias hybrida*, wablers, bluethroat *Luscinia svecica* and reed- bunting *Enberiza schoeniclus*. Along the shore and on low islands, reedbeds provide important refuges for wild boar *Sus scrofa,* European mink *Mustela lutreola*, racoon-dog *Nyctereutes procyonoides* and water vole *Arvicola terrestris*. Steppe polecat *Mustela eversmanni*, stone marten *Martes foina* and red

fox *Vulpes vulpes* occur in winter. It is also an important staging area for geese during autumn migrations.

1. Shore and islands

Differences in elevation, area and micro-relief of the islands as well as yearly and seasonal changes in inundation and salinity determine the occurrence of different stages of vegetation succession in the same growing period. Due to this, three groups of islands are distinguished in the reservoir:

* a few high islands (which are at an elevation of more than 2 m at high water and large in area: about 100 ha) are covered by grasses and used for grazing and agriculture;
* islands of medium elevation (between 1 and 2 m high) are mainly small, covered by meadow and steppe vegetation with reedbeds along the water edge. These provide breeding sites for geese, ducks and egrets;
* low islands (islands which are at an elevation of less than 1.0 m) vary in area. Vegetation is characterized by the solonchak species and reed. Colonies of Ciconiiformes, gulls and terns are found on these islands, as well as breeding geese and ducks. Wild boar *Sus scrofa* is frequent. Some of the islands are occupied by cereal crops. Breeding and migrating populations of geese use the fields for feeding and roosting.

The northern shore of the reservoir is precipitous, its height comprises 10 m by the dams, and one to five m in the middle part. Reeds are found in the mouths of streams and sometimes at the shallows. The southern coast is lower: one to three m high, with an extensive littoral belt of reeds (up to 1 km wide in the lower part of the reservoir). Along the shore willows *Salix alba* have been planted. At low sites, steppe species occur: *Artemisia, Juncus* and *Tripolium* sp. At solonetz (alcali soils), *Salsola, Atriplex verrucifera* and *Limonium gmelini* are found.

1. Artificial forests

There are two sites within the area where forests have been planted: the Dubrava, 600 ha in area, on the southern shore near the village of Dalnii and the 800 ha Dubki on the right bank of the Bolshaya Sadkovka ravine. Tree species include oak *Quercus*, elm *Ulmus foliacea*, willow *Salix alba*, *Thelycrania* and some others. In both forests, the following mammals are found: roe deer *Capreolus pygargus*, wild boar *Sus scrofa*, wolf *Canis lupus*, red fox *Vulpes vulpes*, Eurasian badger *Meles meles*, stone marten *Martes foina* and brown hare *Lepus capensis*. Breeding birds include pheasant *Phasianus colchicus*, partridge *Perdix perdix*, wood pigeon *Columba palumbus*, turtle dove *Streptopelia turtur*, kestrel *Falco tinnunculus*, red-footed falcon *Falco vespertinus*, goshawk *Accipiter gentilis*, long-eared

owl *Asio otus*, scops owl *Otus scops*, great spotted woodpecker *Dendrocopos major*, hooded crow *Corvus cornix*, magpie *Pica pica*, chaffinch *Fringilla coelebs*, greenfinch *Chloris chloris*, goldfinch *Carduelis carduelis*, whitethroat *Sylvia communis*, barred wabler *S.nisoria* and thrush nightingale *Luscinia luscinia*. A pair of white-tailed eagle *Haliaeetus albicilla* was registered in Dubrava.

1. Rice fields

Rice growing systems were established at an area of 50,000 ha. For the most part, these fields are abandoned now, used as hay fields or overgrown with reeds. In the drains and canals, *Lemna, Hydrocharis morsus, Salvinia, Typha* and *Phragmites* occur. About 100 species of bird have been registered there. Breeding species include purple heron *Ardea purpurea*, little bittern *Ixobrychus minutus*, mallard *Anas platyrhynchos*, watercock *Gallicrex cinerea*, bluethroat *Luscinia svecica*, black-winged stilt *Himantopus himantopus*, common plover *Vanellus vanellus*, white-winged black tern *Chlidonias leucoptera*, kingfisher *Alcedo atthis*, skylark *Alauda arvensis*, collared pratincole *Glareola pratincola* and black-winged pratincole *G.nordmanni*. In winter and spring, before the fields are inundated, they provide feeding areas for geese, rooks, cranes *Anthropoides virgo* and partridges. When the fields are flooded (in May), migrants dominate: little stint *Calidris minuta*, dunlin *C.alpina*, red-necked phalarope *Phalaropus lobatus*, herring gull *Larus argentatus* and black-headed gull *L.ridibundus*. The number of birds is over 3,000 individuals per sq.km. By June, it decreases to 350 individuals per sq.km, and in July, when rice paddies conceal the water, it is not more than 60-80 individuals. In this period, dominant species are mallard *Anas platyrhynchos*, white-winged black tern *Chlidonias leucoptera*, herons and wagtails.