# LAKE IN THE ŞTEFAN VODĂ AREA

## ACTION PLAN -

RESTORATION OF THE POND BUFFER ZONE.





























### Contents

Acction plan	3
Proposed plants	3
First phase of planting	6



























#### Action plan

#### Action plan includes:

- Restoration of the pond buffer zone. Eradication of alien plant species.
- \* Restoration of the pond buffer zone. Planting autochthonous trees and shrub.
- erosion and fertilizers pervasion in the riparian zone
- Restoration of the pond waters
- \* Restoration of species

#### Proposed plants

The base for the development of recreation and tourism is closely related to the ecological function of the lake and its immediate surroundings. Therefore, recreational and landscape values will be improved by introducing to the shore of the lake species such as:

Table 1. Plants in the shore of the lake

Name in Latin	Name in English	Location on map (Fig. 2)
Epilobium angustifolium	fireweed	Orange color
Lythrum salicaria	purple loosestrife	Orange color
Spiraea salicifolia	bridewort	Orange color
Tamarix ramosissima Bunge	saltcedar	Orange color
Eupatorium cannabinum	hemp-agrimony	Red color
Hippophae rhamnoides	sea-buckthorn	Red color
Crataegus monogyna	common hawthorn	Red color
Elaeagnus angustifolia	Russian olive	Green color
Cornus sanguinea	common dogwood	Green color
Rosa canina	dog rose	Green color
Viburnum opulus	guelder-rose	Green color
Viburnum lantana	wayfarer	Green color
Lonicera tatarica	Tatarian honeysuckle	Blue color
Cytisus praecox	broom	Blue color
Arctostaphylos uva-ursi	kinnikinnick	Blue color
Sorbus aucuparia	rowan	Blue color
Acer campestre	field maple	Blue color

Legend: **Bold** – species resistant to salinity





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Planting plants of the *Salix* and *Populus* species was considered in order to get rid of excessive amounts of nutrients and stop the eutrophication process. However, due to their properties for absorbing large amounts of water and draining the area, considering the tendency of the lake to dry out and precipitation is relatively low in last years, it was decided to abandon the use of these species. Another aspect in favor of not using these plants was their high allergenicity which would be unfavorable, considering the planned development of tourism in the area. In addition, willows require care for the removal of branches. If this is not done, these plants break, and eventually die.

To prevent reservoir from eutrophication species of water plants were proposed.

The presence of macrophytes in reservoirs is on the one hand a guarantee of good ecological status, on the other an undeniable aesthetic value. Additionally, the development of vegetation inside the lake favors the protection of ichthyofauna. Therefore, different species of macrophytes (according to trophic conditions) were proposed along the lake shore.

Table 2. Plants inside the lake

Name in Latin	Name in English	Location on map (Fig. 2)
Acorus calamus	sweet flag	Along Green color
Typha latifolia	broadleaf cattail	Along Green color
Sagittaria sagittifolia	arrowhead	Along Red color
Schoenoplectus lacustris	lakeshore bulrush	Along Red color
Iris pseudacorus	yellow flag	Along Red color
Carex riparia	greater pond sedge	Along Blue color
Glyceria maxima	great manna grass	Along Blue color
Phalaris arundinacea	reed canary grass	Along Orange color
Stratiotes aloides	water soldiers	Pink color
Potamogeton crispus	curled pondweed	Pink color
Myriophyllum spicatum	spiked water-milfoil	Pink color
Hottonia palustris	water violet	Pink color
Polygonum amphibium	longroot smartweed	Black color
Hydrocharis morsus-ranae	frogbit	Black color
Nymphaea alba	white water rose	Black color
Nuphar lutea	yellow water-lily	Black color
Ranunculus aquatilis	common water-crowfoot	Black color





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The development of vegetation surrounding the lake promotes the creation of habitats for many animal species, including endangered and protected reptiles and amphibians.

Ecological niches are being created, which can be used by native species of beautiful birds such as bee-eater (*Merops apiaster*) or European roller (*Coracias garrulous*).

Taking into account the agricultural areas surrounding the lake and climate changes, the following species have been selected for the areas surrounding the lake:

Table 3. Plants in the distance from the lake

Name in Latin	Name in English	Location on map (Fig. 2)
Echinops ritro	southern globethistle	In little distance from
Aster amellus	European Michaelmas-daisy	south shore
Inula hirta	-	
Astragalus cicer	chickpea milkvetch	
Teucrium chamaedrys	wall germander	
Verbascum phoeniceum	purple mullein	
Asparagus officinalis	garden asparagus	
Veronica spicata	spiked speedwell	Area in the east, along
Thymus serpyllum	Breckland thyme	green and red line
Lavandula angustifolia	true lavender	
Sedum acre	goldmoss stonecrop	
Armeria maritima	thrift, sea thrift	
Philadelphus coronarius	sweet mock-orange	
Cotinus coggygria	smoke tree	
Potentilla fruticosa	shrubby cinquefoil	
Ulmus minor	field elm	
Chaenomeles speciosa	flowering quince	North side of the lake
Cerasus mahaleb	mahaleb cherry	
Prunus tenella	Russian almond	
Prunus spinosa	blackthorn	
Amygdalus triloba	flowering plum	
Prunus dulcis	almond	

Legend: **Bold** – species typical for steppe





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#### First phase of planting

In first phase of planting it is suggested to plant bushes and trees of following species till end of 2019 (from tab. 1):

Tamarix ramosissima Bunge	saltcedar
Hippophae rhamnoides	sea-buckthorn
Crataegus monogyna	common hawthorn
Elaeagnus angustifolia	Russian olive
Cornus sanguinea	common dogwood
Rosa canina	dog rose
Viburnum opulus	guelder-rose
Lonicera tatarica	Tatarian honeysuckle
Cytisus praecox	broom
Sorbus aucuparia	rowan

in the range of 5 - 10 m from the shore of a lake, until end of November/ early December.

Trees shall be placed more on waterfront, than shrubs and grasses further away, next to the open fields. To give the surroundings more natural look and better aesthetics, trees and bushes shouldn't be planted in straight lines but rather "casually".





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