



# Removal of invasive plant species at SCI Pomorie BG0000620, Bulgaria LIFE10 NAT/IT/256 MC-SALT

European workshop on eradication and control of  
invasive plant species in protected areas and Natura  
2000 sites



## Pomorie lake:

- Natural hypersaline lagoon
- Area - 760 ha
- Protected site - 2001
- Ramsar site - 2002
- IBA - 1989
- Natura 2000 site
- pSCI "Pomorie" B
- SPA "Pomorie La







# POMORIE LAKE

**Fish - 8 species**



**Amphibians and reptiles**

- Amphibians - 4 species
- Reptiles – 17 species

**Mammals – 31 species**



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# POMORIE LAKE

## Birds of Pomorie Lake

Total – 271 species (118 species water birds)

Nesting – 57 species

Most important breeding site nationally for:

Sandwich tern, Mediterranean gull

High importance for:

Avocet, Common and Little tern, Black-winged stilt,

Gull-billed tern, Kentish plover

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# POMORIE LAKE

## Habitats listed in DIRECTIVE 92/43/EEC

- 1110 Sandbanks which are slightly covered by sea water all the time
- 1150 Coastal lagoons\*
- 1170 Reefs
- 2110 Embryonic shifting dunes
- 2120 Shifting dunes along the coast ('white dunes')
- 92D0 Southern riparian gallery forest of *Tamaricetea* and *Securinegia*
- 1310 *Salicornia* and other annuals of salt marshes
- 1410 Mediterranean salt meadows and pastures
- 1530 Pannonian salt steppes and pastures

\* priority habitat types

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## POMORIE LAKE

### Plants of Pomorie Lake

87 species:

Sea rocket (*Cakile maritima*)

Sand-pit knapweed (*Centaurea arenaria*)

Sea holly (*Eryngium maritimum*)

*Trachomitum venetum*







## POMORIE LAKE

In 2008-2010 a Management Plan was drafted.

**Important threat for habitats and plants:**

**Invasive alien species – *Amorpha fruticosa* and *Spartium junceum***







# MC SALT LIFE10NAT/IT/256 OVERVIEW



- 1, Po Delta Park E-R, ITALY
 4, Green Balkans, BULGARIA
- 2, Molentargius Park, ITALY
 5, CSME, FRANCE
- 3, Parc Camargue, FRANCE
 6, Tour du Valat, FRANCE





# MC SALT LIFE10NAT/IT/256 OVERVIEW

6 partners from 3 countries (Italy, France, Bulgaria)

10 NATURA 2000 sites – all include salt works (in use or abandoned)

Habitat targeted:

1150\* Coastal lagoon – the highest proportion

1510 Mediterranean Salt Steppes\*

1310 *Salicornia* and other annuals colonizing mud and sand

1420 Mediterranean halophilous scrubs (*Sarcocornetea fruticosi*)

2120 **Shifting dunes along the shoreline –Bulgaria**

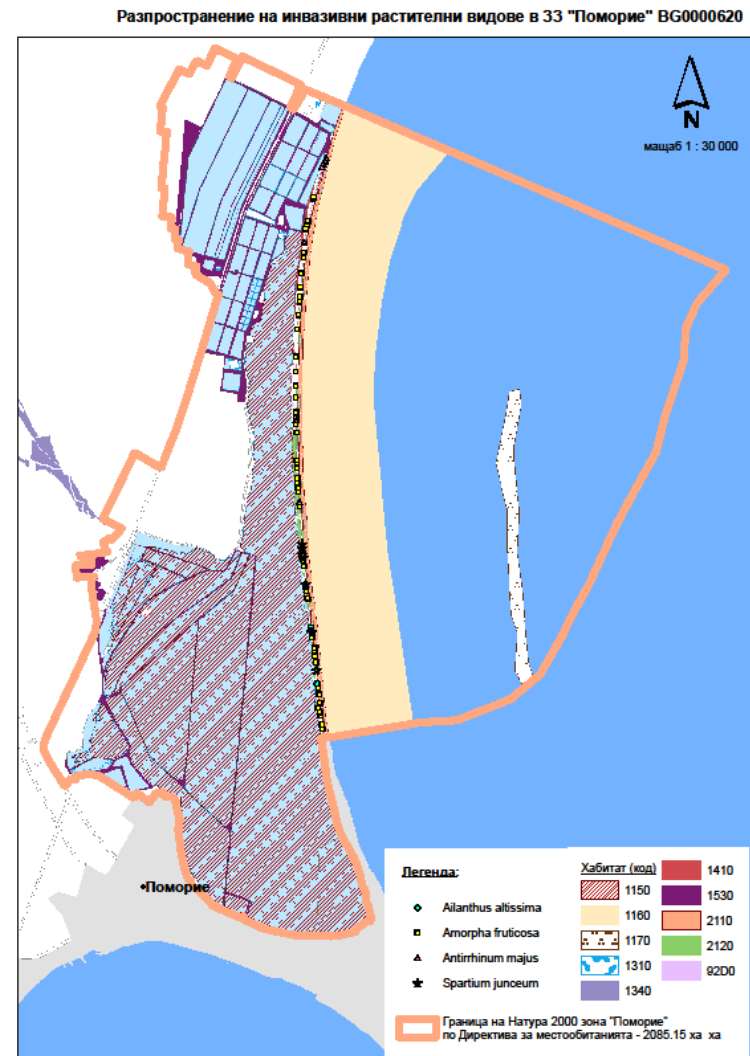
Threats to habitats:

- 1) Progressive decline in water circulation
- 2) Aerial powerline (birds collision provoking fires);
- 3) **Invasive alien species**

LIFE+MC-SALT



## Action A7: Ex-ante monitoring of invasive plant species and nesting waterbirds, executive projects for improvement of nesting conditions and for the removal of invasive plant species in Pomorie Lake







## Action C4:

Improvement of  
nesting conditions  
and  
removal of invasive  
plant species at  
Pomorie Lake





## Action C4:

### Removal of invasive plant species at Pomorie Lake

Target area: sand dunes – 5 km long spit

Means: mechanical without use of herbicide due to existence of many protected plant species (*Eryngium maritimum*, *Stachys maritime*, *Trachomitum venetum*, *Euphorbia peplis*) in vicinity of target invasive species *Amorpha fruticosa* and *Spartium juncum*

Executed by: volunteers





## **Action C4: Improvement of nesting conditions and removal of invasive plant species at Pomorie Lake**







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## **Action C4: Improvement of nesting conditions and removal of invasive plant species at Pomorie Lake**







# GREAT THANKS TO VOLUNTEERS!

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# CONCLUSIONS

- Mechanical removal is suitable method for *Spartium junceum* – all plants were removed successfully
- Mechanical removal is not suitable for *Amorpha fruticosa* – new shoots have grown even though second effort was made in following year



**Thank you for your attention!**

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