

Table S1: Characteristics Species Composition of Habitats of Community Interest (HCI)
Based on Our Phytosociological Expertise in the study Area.

GROUP 1	Coastal and halophytic habitats
1150*	*Coastal lagoons <i>Ruppium drepanensis</i>/ <i>Ruppium cirrhosae</i>/ <i>Ruppium spiralis</i>
<i>Ruppia maritima</i> var. <i>maritima</i>	<i>Ruppion maritimae</i> (RUPPIETEA)
<i>Ruppia cirrhosa</i>	
<i>Althenia orientalis</i>	<i>Ruppion maritimae</i> (RUPPIETEA)
<i>Najas marina</i> . subsp. <i>armata</i>	
<i>Potamogeton</i>	
<i>Lemna minor</i>	
1210	Annual vegetation of drift lines
<i>Cakile maritima</i>	<i>Cakilion maritimae</i> (CAKILETEA)
<i>Salsola kali</i>	<i>Cakiletea maritimae</i> (CAKILETEA)
<i>Beta maritima</i>	<i>Cakiletea maritimae</i>
<i>Chamaesyce peplis</i>	<i>Cakiletea maritimae</i> (CAKILETEA)
1240*	+ Vegetated sea cliffs with endemic <i>Limonium</i> spp.
<i>Crithmum maritimum</i>	<i>Crithmo-Limonietea</i>
<i>Limonium malacitanum</i>	<i>Crithmo-Limonion</i>
<i>Limonium cossonianum</i>	<i>Limonietalia</i>
<i>Lavatera mauritanica</i>	
<i>Asteriscus maritimus</i>	<i>Crithmo-Limonietea</i>
<i>Limonium delicatulum</i>	
<i>Limonium ferulaceum</i>	
<i>Limonium insigne</i>	
<i>Rosmarinus tomentosus</i>	<i>Rosmarinetum tomentosi</i>
<i>Plantago macrorhiza</i>	<i>Limonietalia</i>
<i>Frankenia hirsuta</i>	Shared with <i>Pegano-Salsolitea</i>
<i>Frankenia corymbosa</i>	Shared with <i>Pegano-Salsolitea</i>
1310	<i>Salicornia</i> and other annuals colonising mud and sand
<i>Hordeum marinum</i>	<i>Hordeion marini</i> (SAGINETEA MARITIMAE)
<i>Parapholis incurva</i>	<i>Saginetea maritimae</i> (SAGINETEA MARITIMAE)
<i>Frankenia pulverulenta</i>	<i>Frankenietalia pulverulentae</i> (SAGINETEA MARITIMAE)
<i>Spergularia bocconeii</i>	
<i>Spergularia nicaensis</i>	
<i>Spergularia heldreichii</i>	
<i>Spergularia marina</i>	<i>Saginetea maritimae</i> (SAGINETEA MARITIMAE)
<i>Polypogon maritimus</i>	
<i>Salicornia ramosissima</i>	
<i>Suaeda spicata</i>	
<i>Catapodium maritimum</i>	
<i>Sphenopus divaricatus</i>	
1410	Mediterranean salt meadows (<i>Juncetalia maritimi</i>)
<i>Plantago maritima</i>	
<i>Juncus maritimus</i>	<i>Juncetea maritimi</i>
<i>Juncus acutus</i>	<i>Juncetea maritimi</i>
<i>Tetragonolobus maritimus</i>	<i>Juncetalia maritimi</i>
<i>Puccinellia fasciculata</i>	<i>Juncion maritimi</i>
<i>Sonchus maritimus</i>	
<i>Carex extensa</i>	<i>Juncetalia maritimi</i>
<i>Juncus subulatus</i>	
<i>Dorycnium gracile</i>	
1420	Mediterranean and thermo-Atlantic halophilous scrubs (<i>Sarcocornetea fruticosi</i>)
<i>Suaeda vera</i> subsp. <i>vera</i>	<i>Suaedion verae</i>
<i>Halimione portulacoides</i>	<i>Arthrocnemion macrostachyi</i>
<i>Limoniastrum monopetalum</i>	<i>Sarcocornietalia fruticosae</i>
<i>Frankenia corymbosa</i>	<i>Limoniastrion monopetali</i>
<i>Frankenia laevis</i>	

<i>Sarcocornia perennis</i>	
<i>Sarcocornia fruticosa</i>	
<i>Inula crithmoides</i>	<i>Sarcocornietea fruticosae</i>
1430	Halo-nitrophilous scrubs (<i>Pegano-Salsoletea</i>)
<i>Atriplex halimus</i>	<i>Salsolo vermiculatae-Peganelalia harmalae</i>
<i>Atriplex glauca</i>	<i>Atriplici-Hammadion articulatae</i>
<i>Salsola oppositifolia</i>	<i>Salsolo vermiculatae-Peganelalia harmalae</i>
<i>Whitania frutescens</i>	<i>Salsolo vermiculatae-Peganelalia harmalae</i>
<i>Lycium intrincatum</i>	<i>Pegano-Salsoletea</i>
<i>Suaeda vera</i> subsp. <i>vera</i>	<i>Salsolo-Peganion harmalae</i>
<i>Fagonia cretica</i>	<i>Salsolo-Peganion harmalae</i>
<i>Frankenia hirsuta</i>	<i>Atriplici-Hammadion articulatae</i>
<i>Anabasis articulata</i>	
<i>Frankenia corymbosa</i>	
<i>Artemisia campestris</i>	
<i>Hamada articulata</i>	
GROUP 2	Coastal sand dunes and inland dunes
2110*	*Embryonic shifting dunes
<i>Elymus farctus</i> (<i>Agropyron junceum</i>)	<i>Sporobolion arenarii</i> para <i>Sporobolus arenarius</i>
<i>Sporobolus pungens</i>	
<i>Euphorbia peplis</i>	<i>Ammophiletalia</i>
<i>Eryngium maritimum</i>	<i>Ammophiletea</i>
<i>Pancratium maritimum</i>	
<i>Lotus arenarius</i>	
<i>Cyperus capitatus</i>	
<i>Euphorbia paralias</i>	
<i>Centaurea sphaerocep</i>	<i>Ammophiletea</i>
2120*	*Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes)
<i>Ammophila arenaria</i>	
<i>Euphorbia paralias</i>	
<i>Otanthus maritimus</i>	
<i>Medicago marina</i>	
<i>Polygonum maritimum</i>	
<i>Lotus creticus</i>	
<i>Medicago marina</i>	
<i>Lotus cytisoides</i>	
2190*	*Humid dune slacks
<i>Tamarix</i> sp.	<i>Tamaricetalia</i>
<i>Scirpoides holoschoenus</i>	<i>Holoschoenetalia vulgari</i>
<i>Juncus acutus</i>	<i>Juncetalia maritimi</i> :
<i>Juncus maritimus</i>	<i>Juncetea maritimi</i>
<i>Galium palustre</i>	<i>Magnocaricetalia</i> :
<i>Saccharum ravennae</i>	<i>Imperato-Saccharion ravennae</i>
<i>Schoenus nigricans</i>	<i>Molinio-Arrhenatheretea</i>
2210*	*Crucianellion maritimae fixed beach dunes
<i>Crucianella maritima</i>	
<i>Pancratium maritimum</i>	
<i>Ononis talaverae</i>	
<i>Ononis ramosissima</i>	
<i>Polygonum maritimum</i>	
<i>Silene nicaeensis</i>	
<i>Pycnocomon rutifolium</i>	
<i>Pycnocomon intermedium</i>	
<i>Reichardia gaditana</i>	
2230_0*	*Malcolmietalia dune grasslands
<i>Linaria pedunculata</i>	
<i>Silene littorea</i>	
<i>Hedypnois arenaria</i>	

<i>Pseudorlaya pumila</i>	
<i>Malcomia littorea</i>	
<i>Vulpia alopecuros</i>	
2250*	*Coastal dunes with <i>Juniperus</i> spp.
<i>Juniperus turbinata</i> subsp. <i>turbinata</i>	
<i>Osyris quadripaertita</i>	
<i>Rhammus oleoides</i>	
<i>Pistacia lentiscus</i>	
2260_2	*High sclerophyllous scrubs on coastal dunes
<i>Pistacia lentiscus</i>	
<i>Calicotome villosa</i>	
<i>Asparagus aphyllus</i>	
<i>Phillyrea</i> sp.	
<i>Rhamnus oleoides</i>	
<i>Chamaerops humilis</i>	
<i>Myrtus comunis</i>	
<i>Juniperus phoenicia</i> subsp. <i>turbinata</i>	
2270*	Wooded dunes with <i>Pinus pinea</i> and/or <i>Pinus pinaster</i>
<i>Pinus pinea</i>	
<i>Pinus pinaster</i>	
<i>Juniperus turbinata</i> subsp. <i>turbinata</i>	
<i>Juniperus phoenicea</i> subsp. <i>turbinata</i>	
<i>Pistacia lentiscus</i>	
<i>Rhamnus alaternus</i>	
<i>Phyllirea angustifolia</i>	
<i>Asparagus albus</i>	
<i>Smilax aspera</i>	
<i>Aristolochia baetica</i>	
<i>Rubia peregrina</i>	
<i>Chamaerops humilis</i>	
<i>Halimium halimifolium</i>	
GROUP 3	Freshwater habitats
3150_0*	*Natural eutrophic lakes
<i>Lemna minor</i>	
<i>Potamogeton</i>	
3250	Constantly flowing Mediterranean rivers with <i>Glaucium flavum</i>
<i>Glaucium flavum</i>	
GROUP 5	Sclerophyllous scrub (matorral)
5220*	*Arborescent scrubs with <i>Ziziphus</i>
<i>Ziziphus lotus</i>	
<i>Periploca angustifolia</i> subsp. <i>laevigata</i>	
<i>Maytenus senegalensis</i> subsp. <i>europaea</i>	
<i>Withania frutescens</i>	
5330	Thermo-Mediterranean and pre-desert scrub
5330_1	Arborescent scrubs of <i>Arbutus unedo</i> and other lauroid shrubs (<i>Ericion arboreae</i>)
<i>Arbutus unedo</i>	<i>Ericion arboreae</i>
<i>Viburnum tinus</i>	<i>Quercetalia ilicis</i>
<i>Phyllirea angustifolia</i>	
<i>Cytisus arboreus</i> subsp. <i>baeticus</i>	
<i>Teline monspessulana</i>	<i>Cytiso-Telinetalia monspessulana</i>
<i>Phyllirea latifolia</i>	
5330_5	Thermophilic and xerophilic Mediterranean thymes (<i>ROSMARINETEA OFFICINALIS</i>)

<i>Odontites purpurea</i>	
<i>Thymus baeticus</i>	<i>Lavandulion lanatae</i>
<i>Thymra capitata</i>	<i>Saturejo-Thymbrion capitatae</i>
<i>Teucrium lusitanicum</i>	
<i>Satureja obovata</i>	
<i>Fumana thymifolia</i>	
<i>Helianthemum hirtum</i>	<i>Rosmarinetalia officinalis</i>
<i>Helianthemum almeriense</i>	<i>Thymo-Sideritidion leucanthae</i>
<i>Rosmarinus officinalis</i>	
<i>Cistus clusii</i>	
<i>Cistus albidus</i>	
<i>Ulex parviflorus</i>	<i>Lavandulion lanatae</i>
<i>Genista umbellata</i>	
<i>Phlomis purpurea</i>	
<i>Sideritis incana</i>	
<i>Anthyllis cytisoides</i>	
<i>Helianthemum syriacum</i>	
<i>Cistus clusii</i>	
<i>Thymus granatensis</i>	
GROUP 6	Natural and semi-natural grassland formations
6220*	*Pseudo-steppe with grasses and annuals of the <i>Thero-Brachypodietea</i>
6220_1*-	Neutro-basophilous Mediterranean perennial grasslands (<i>Lygeo-Stipetea</i>)*-
<i>Brachypodium retusum</i>	<i>Lygeo-Stipetea</i>
<i>Festuca scariosa</i>	<i>Festucion scariosae</i>
<i>Dactylis hispanica</i>	<i>Lygeo-Stipetea</i>
<i>Avenula bromoides</i>	<i>Lygeo-Stipetalia</i>
<i>Helictotrichon sarracenorum</i>	Synonymous with <i>Helictotrichon filifolium</i> subsp. <i>velutinum</i> . <i>Festucion scariosae</i>
<i>Ruta chalepensis</i>	
GROUP 7	Raised bogs and mires and fens
7210_1	Calcareous fens with <i>Cladium mariscus</i> in dunes and sands
<i>Cladium mariscus</i>	
<i>Carex hispida</i>	
<i>Carex helata</i>	
GROUP 91	Forest of Boreal Europe
91B0_0, 91B0_1	Thermophilous <i>Fraxinus angustifolia</i> woods
<i>Fraxinus angustifolia</i>	<i>Fraxino angustifoliae-Ulmenion minoris</i>
<i>Salix atrocinerea</i>	<i>Populetales albae</i>
<i>Populus nigra</i>	<i>Salici-Populetea</i>
<i>Salix salviifolia</i>	<i>Salicion salviifoliae</i>
<i>Salix alba</i>	<i>Salicion albae</i>
<i>Salix pedicellata</i>	<i>Salicion pedicellatae</i>
<i>Vitis vinifera</i> subsp. <i>sylvestris</i>	<i>Salici-Populetea</i>
<i>Ulmus minor</i>	Riparian forest of <i>Ulmus minor</i>
GROUP 92	<i>Salix alba</i> and <i>Populus alba</i> galleries
92A0	<i>Salix alba</i> and <i>Populus alba</i> galleries
92A0_0	<i>Populus</i> and <i>Salix</i> galleries
<i>Populus alba</i>	
<i>Salix alba</i>	
92A0_1+	Riparian mixed forest of <i>Ulmus</i> and <i>Salix</i>
<i>Salix alba</i>	
<i>Salix x neotricha</i>	
<i>Salix atrocinerea</i>	
<i>Ulmus minor</i>	
92A0_2	Riparian shrubland of <i>Salix</i>
<i>Salix atrocinerea</i>	
<i>Salix eleagnos</i>	
<i>Salix purpurea</i>	
<i>Salix salviifolia</i>	
<i>Salix pedicellata</i>	

<i>Salix fragilis</i>	
<i>Erica terminalis</i>	
<i>Erica erigena</i>	
92D0_0	Southern riparian galleries and thickets (<i>Nerio-Tamaricetea</i>)
<i>Nerium oleander</i>	
<i>Tamarix canariensis</i>	
<i>Tamarix boveana</i>	
<i>Vitex agnus-castus</i>	
<i>Tamarix africana</i>	
<i>Rubus ulmifolius</i>	
<i>Tamarix gallica</i>	
<i>Coriaria myrtifolia</i>	

Table S2: Classification of Habitat of community Interest (HCI) groups.

CODE	HIC NAME	
1_H	Halo/halo-nitrophilous vegetation	
	1430	Halo-nitrophilous scrubs (<i>Pegano-Salsoletea</i>)
1_A	<i>Limonium</i> spp. habitats	
	1240 ⁺	⁺ Vegetated sea cliffs of the Mediterranean coasts with endemic <i>Limonium</i> spp.
1_He*	Saline edaphohygrophilous vegetation	
	1310	<i>Salicornia</i> and other annuals colonising mud and sand
	1410	Mediterranean salt meadows (<i>Juncetalia maritimi</i>)
	1420	Mediterranean and thermo-Atlantic halophilous scrubs (<i>Sarcocornetea fruticosi</i>)
	1510*	Saline edaphohygrophilous vegetation (<i>Limonietalia</i>)*
1_L*	Vegetation in flooded or wetland areas	
	1150*	*Coastal lagoons
	3150_0 ⁺	Natural eutrophic lakes ⁺
	7210_1*	Calcareous fens with <i>Cladium mariscus</i> in dunes and sands *
2_M	Dunes with small shrubs	
	1210	Annual vegetation of drift lines
	2110 ⁺	*Embryonic shifting dunes
	2120 ⁺	*Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes)
	2190 ⁺	*Humid dune slacks
	2210 ⁺	* <i>Crucianellion maritimae</i> fixed beach dunes
	2230_0 ⁺	* <i>Malcolmietalia</i> dune grasslands
2_A*	Dunes with tall shrubs and pine trees	
	2250*	*Coastal dunes with <i>Juniperus</i> spp.
	2260_2 ⁺	*High sclerophyllous scrubland on coastal dunes
	2270*	Wooded dunes with <i>Pinus pinea</i> and/or <i>Pinus pinaster</i>
	2180_2	Wooded dunes of dune regions
5_M	Sclerophyllous scrubland	
	5330_5	Thermophilic and xerophilic Mediterranean thymes
5_M*	Relict shrubland	
	5220*	*Arborescent matorral with <i>Ziziphus</i>
6_P*	Mediterranean grassland	
	6220_0*-	Mediterranean annual grasslands, neutro-basophilic and thermo-xerophytic (<i>Trachynietalia distachyae</i>)*-
	6220_1*-	Neutro-basophilous Mediterranean perennial grasslands(<i>Lygeo-Stipetea</i>)*-

9_Br	Riparian forests (i.e. edaphohygrophilous vegetation).	
	91B0_0, 91B0_1	Thermophilous <i>Fraxinus angustifolia</i> woods (91B0_1; 91B0_0)
	92A0_0	Riparian mixed forest of <i>Ulmus</i> and <i>Salix</i>
	92A0_1 ⁺	Riparian forest of <i>Ulmus minor</i> ⁺
	92A0_2	<i>Salix</i> galleries
	92D0_0	Southern riparian galleries and thickets (<i>Nerio-Tamaricetea</i> and <i>Securinegion tinctoriae</i>)
	3250	Constantly flowing Mediterranean rivers with <i>Glaucium flavum</i>

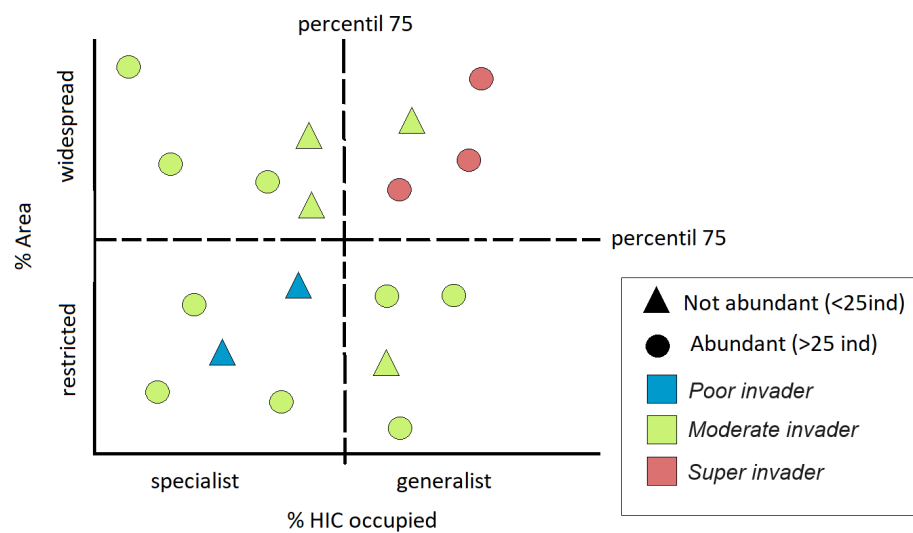


Figure S1. Schematic representation of the method used to estimate current invasion degree based on [32].

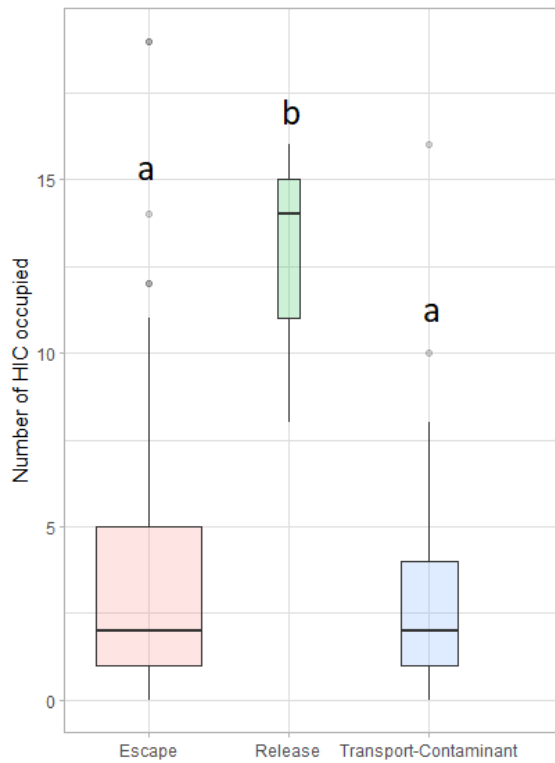


Figure S2. Number of occupied HIC per species classified by species introduction pathway (p-value < 0.03556).

Table S5. Total number of invasive species (super invader or potentially invader) by geographic area (protected or non-protected) and zonification. *Current invasion categories follow our classification obtained in the section 3.2 and 3.4 of the manuscript. Area follows the classification used in section 2.6 of the manuscript.

Area name	*Super invader	*Potential ly invader	Total invasive species	Category	*Zone
Calahonda-Castell de Ferro cliffs	3	0	3	natural protected area	prevention
Charca Suárez	1	0	1	natural protected area	prevention
Dunas de Marbella	4	2	6	natural protected area	eradication
From El Rincon de la Victoria to El Cantal and El Morche	11	6	17	non-protected area	eradication
Guadaiza river	4	0	4	natural protected area	eradication
Guadalmansa river	2	0	2	natural protected area	prevention
Guadalmina river	2	0	2	natural protected area	prevention

La rábita	7	2	9	non-protected area natural	eradication
Manilva river	3	0	3	protected area non-protected area natural	prevention
Marbella bay	8	1	9	protected area non-protected area natural	eradication
Maro-Cerro Gordo cliffs	2	0	2	protected area non-protected area natural	prevention
Mouth of guadalfeo river	10	2	12	protected area non-protected area natural	eradication
Mouth of gadalhorce river	5	0	5	protected area non-protected area natural	eradication
Nerja	9	4	13	protected area non-protected area natural	eradication
Padrón river	4	2	6	protected area non-protected area natural	eradication
Punta Chullera	4	2	6	protected area non-protected area natural	eradication
Punta de la mona cliffs	1	2	3	protected area non-protected area natural	prevention
Real river	4	0	4	protected area non-protected area natural	eradication
Tesorillo-Salobreña cliffs	2	1	3	protected area non-protected area natural	prevention
Verde river	2	0	2	protected area Non-protected area	prevention
Coastal areas of Motril	5	3	8	Non-protected area	eradication