APPLICATION OF A SIMPLIFIED RISK ASSESSMENT METHOD FOR CONTROLLING INVASIVE ALIEN PLANT SPECIES IN PROTECTED AREAS: A CASE STUDY IN ŠUMAVA NATIONAL PARK, CR

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Main invader of Sumava NP

- Ability to propagate vegetatively from creeping rhizomes

- Ability to tolerate harsh conditions

- Introduced accidentally or for ornamental reasons

- Inhabits a range of habitat types from open ruderal habitats, such as **road verges, wastelands, meadows to river banks**
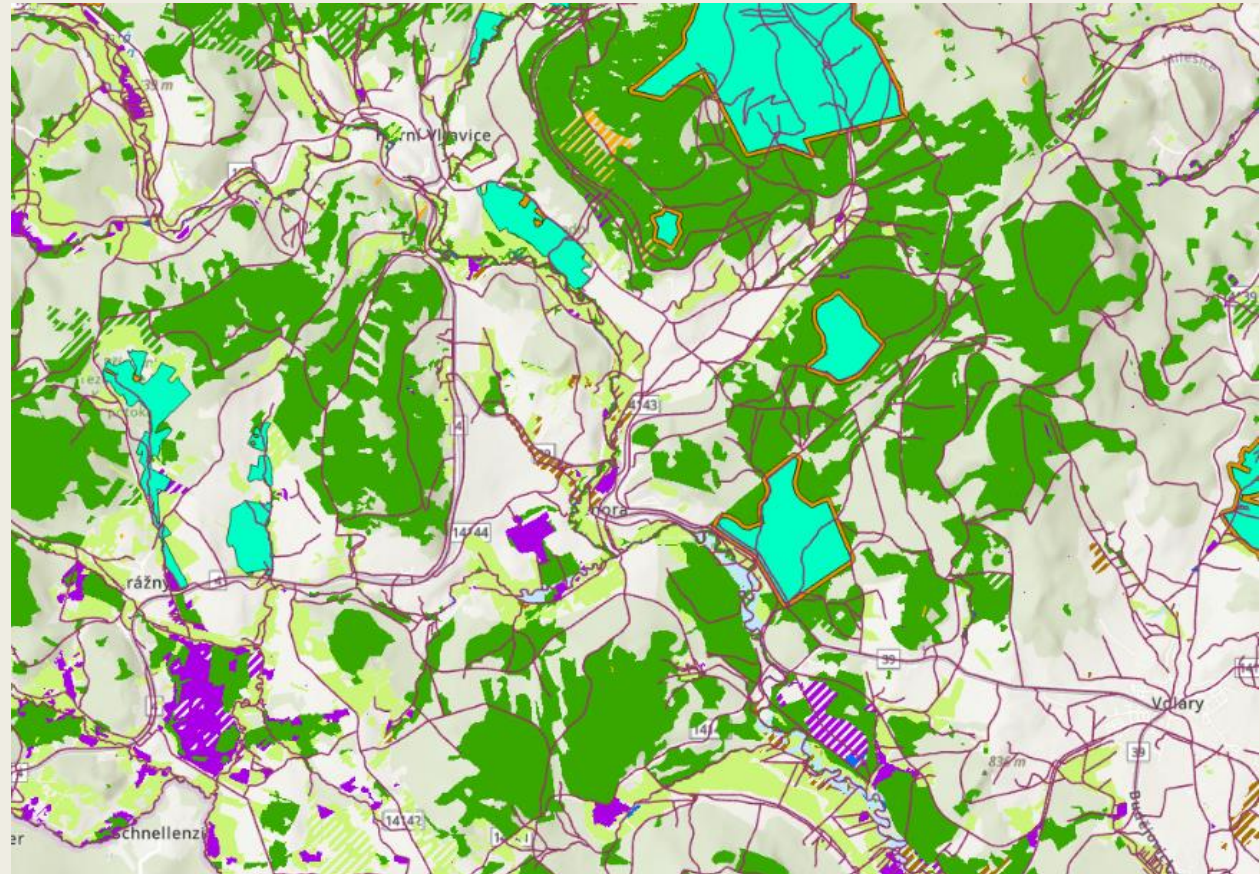
Lupinus polyphyllus (Bigleaf Lupine)

Manual Assessment

Data used:

- roads

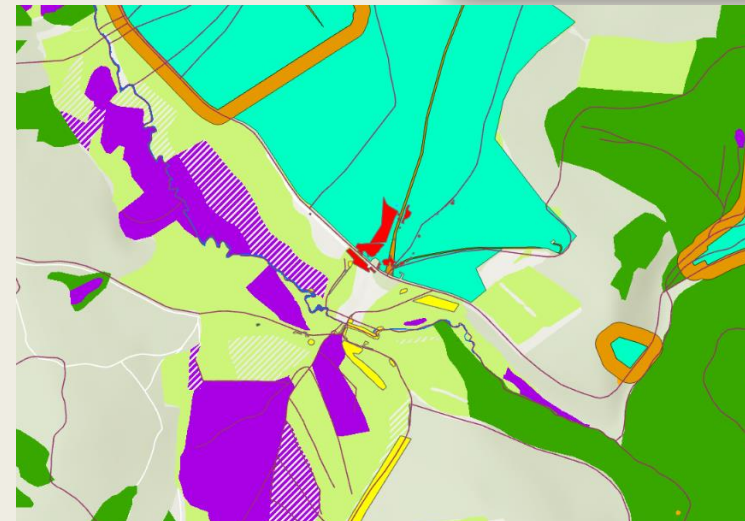- streams

- protected area zone

- buffer zone

New data added:
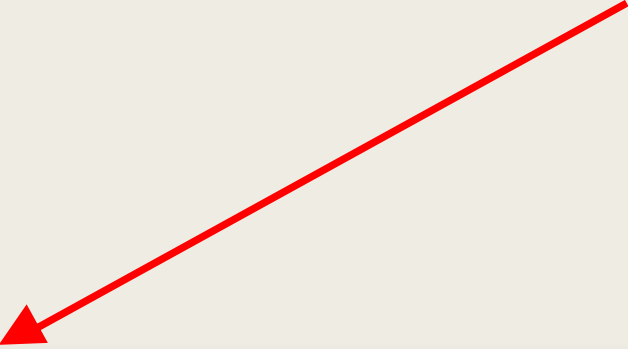
- **Habitats/biotops**

Prioritization

- Category I (1): Immediate control, High Priority

- Category II (2): Risk of expansion, Medium Priority

- Category III (3): Low-risk, Low priority

Excel data analysis

GlobalID	Species	GIS Application	Manual	Rate of Disagreement	Justify
{E3AD4BCF-EF6E-40E4-9854-0F37358A187D}	*Lupinus pollyphyllus*	2	2	0	inside grassland/heathland habitat, near stream and road
{4713AD77-C7F9-4B3D-BA29-24E3300F9942}	*Lupinus pollyphyllus*	2	2	0	near road
{FF7C6186-64F5-4EFE-AFA1-F5F0CA50A9B5}	*Lupinus pollyphyllus*	2	2	0	inside grassland/heathland habitat, near road
{4ACF362A-616A-4794-9D3D-4AFFC201EAB2}	*Lupinus pollyphyllus*	2	2	0	inside grassland/heathland habitat, near road
{C5C2A3AF-8053-4CD4-A827-D572AA7E3696}	*Lupinus pollyphyllus*	2	2	0	above road, inside grassland/heathland habitat
{F6321BC0-91C0-4C42-9350-962ABC384A1B}	*Lupinus pollyphyllus*	2	2	0	inside grassland/heatlhland, near peatbogs + roads
{C02A5B3A-2BF0-4508-A7C3-523C1600ECE2}	*Lupinus pollyphyllus*	2	2	0	near peatbogs
{60A3138B-F5D1-4D79-B9E8-0613B3CEF7BC}	*Lupinus pollyphyllus*	2	2	0	near peatbogs
{2B0F46C6-F730-4ABB-AED5-8DF154DFAC7F}	*Lupinus pollyphyllus*	2	2	0	inside peatbogs, near forest habitat
{310948C5-F179-4567-BEAD-AEFC8714FECC}	*Lupinus pollyphyllus*	2	2	0	inside heathlands and stream habitats, nearby roads
{A0F2DB25-5513-4366-975F-2F9D85E62A79}	*Lupinus pollyphyllus*	2	2	0	inside heathlands, nearby roads
{054190D0-2A12-4699-948D-FD4B4BCC1332}	*Lupinus pollyphyllus*	2	2	0	inside heathlands, nearby streams
{5078E3DE-DA5A-4748-B817-83E13789D314}	*Lupinus pollyphyllus*	2	2	0	inside heatlands and peatbogs habitats
{77113AD7-F29E-466C-8489-5DE4810B741A}	*Lupinus pollyphyllus*	2	2	0	inside heatlands and peatbogs habitats
{2D822143-F843-479E-80C2-70FD59D4DD96}	*Lupinus pollyphyllus*	2	2	0	inside heatlands and peatbogs habitats
{134ED0F6-FE73-4491-A521-EEE4541F1E01}	*Lupinus pollyphyllus*	2	3	1	nearby heathlands and petbogs habitats and roads
{A4EFA07C-DA9B-4A2B-88F9-EFCDFE761A96}	*Lupinus pollyphyllus*	2	2	0	inside forest
{4B2352BC-81C7-4BDB-91DF-4C46708749AB}	*Lupinus pollyphyllus*	2	2	0	inside heathland habitat, close to stream
{054F9A60-D598-49BB-8AD9-CC4462B78520}	*Lupinus pollyphyllus*	2	2	0	inside heathland
{0625060A-1833-4351-9E37-2C1172D849BF}	*Lupinus pollyphyllus*	2	2	0	inside heathland
{B7281F4A-BE79-4FF8-A052-B9DE032947A8}	*Lupinus pollyphyllus*	2	2	0	inside heathland
{D9BD0F12-DE6E-476A-BFB4-1A855CE576A3}	*Lupinus pollyphyllus*	2	2	0	inside heatland, expansion in streams
{5F896588-6BB3-4519-9A3D-4636CEB3B19A}	*Lupinus pollyphyllus*	2	2	0	inside heathland
{B97A7383-702F-4611-9A0B-99A190E6EC8A}	*Lupinus pollyphyllus*	2	2	0	inside heathland
{33F65227-267E-475F-9426-7021EE6E495E}	*Lupinus pollyphyllus*	3	3	0	
{0875EDD0-4224-4467-9BDE-CC1C4E0379B4}	*Lupinus pollyphyllus*	3	3	0	
{3C327759-1BC3-44EF-A72B-624489A6A667}	*Lupinus pollyphyllus*	3	3	0	
{AE410BB1-E5E0-4631-9E21-D62A2A287EEB}	*Lupinus pollyphyllus*	3	3	0	nearby peatbogs, but not inside any habitat or near road

Data analysis

GIS vs Manual Assessment Evaluation:

- Binomial GLM

Results:

- 1st Category, 49 cases, rate of dis. 0,14
- 2nd Category, 127 cases, rate of dis. 0.10
- **3rd Category, 73 cases, rate of dis. 0.2**