

ANNEX 1 – MAIN SECTORAL STAKEHOLDERS IN THE RILA – VERILA – KRAISHTE CORRIDOR PILOT AREA (BG)

Threats – Objectives – Sectors – Stakeholders

| THREAT / PRESSURE <i>What we want to address?</i> | SPECIFIC OBJECTIVE <i>What we want to achieve?</i> | | | SECTOR <i>Who is impacted / interested?</i> | STAKEHOLDERS (WORK IN PROGRESS) | MAIN ACTORS (WORK IN PROGRESS) <i>Who is responsible / could contribute?</i> | Notes, contacts etc. |
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| | High priority | Medium priority | Low priority | | | | |
| 1. Increasing <u>barrier effect</u> through implementation of <u>new infrastructure projects</u> | 01.Ensure support data for new transport projects | | | TRANSPORT, ENVIRONMENT, LAND USE SPATIAL PLANNING | Ministry of Transport MT, Ministry of Environment and Waters MOEW, Ministry of Regional Development and Public Works MRRB | MRRB, MT, MOEW | |

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| | 02. Support SEA/EA | TRANSPORT, ENVIRONMENT, LAND USE SPATIAL PLANNING | Ministry of Transport MT, Ministry of Environment and Waters MOEW, Ministry of Regional Development and Public Works MRRB | MRRB, MT, MOEW | |
| | 03. Ensure best option for new project is being selected | TRANSPORT, ENVIRONMENT, LAND USE, SPATIAL PLANNING, AGRICULTURE, FORESTRY | Ministry of Transport MT, Ministry of Environment and Waters MOEW, Ministry of Regional Development and Public Works MRRB, Ministry of Agriculture and Forestry, Regional administrations of SW region | MRRB, MT, MOEW, Ministry of Agriculture and Forestry, Regional administrations of Sofia, Pernik, Dupnitsa | |

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| | 1. Ensure functionality of underpasses | <p>TRANSPORT, ENVIRONMENT, Agriculture, LAND USE Spatial planning Land ownership/ PRIVATE LAND OWNERS</p> | <p>Ministry of regional development, Road Infrastructure Agency, Ministry of Environment and Waters, Ministry of Transport, Executive Agency “Automobile Administration”, Motorways EAD(state company) Directorate General for Agriculture & Forestry, Holding Bulgarian State Railways EAD(state company), Rila National Park, Regional, Regional Environment Agencies, Regional Basin</p> | <p>MRRB, MT, MOEW, Ministry of Agriculture and Forestry, Regional administrations of Sofia, Pernik, Dupnitsa, Regional environment and waters agencies, Regional administrations, Local administrations, land owners, Regional Env Agency Sofia</p> | |
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| | | | Directorate, State Agency for Road Safety (at Council of Ministers), Land owners, Motorway comp., Railway comp., Env. agency., | | |
| | 2. Ensure functionality of overpasses | TRANSPORT, ENVIRONMENT, Agriculture, Spatial planning LAND USE Land ownership/ PRIVATE LAND OWNERS | Ministry of regional development, Road Infrastructure Agency, Ministry of Environment and Waters, Ministry of Transport, Executive Agency “Automobile Administration”, Motorways EAD(state company) Directorate General for Agriculture & Forestry, Holding Bulgarian State | MRRB, MT, MOEW, Ministry of Agriculture and Forestry, Regional administrations of Sofia, Pernik, Dupnitsa, Regional environment and waters agencies , Regional Env Agency Sofia, Regional administrations, Local administrations, land owners, | |

ANNEX 2 – MAIN SECTORAL STAKEHOLDERS IN THE RILA-VERILA-KRAISTHE CORRIDOR

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| | | | <p>Railways EAD(state company), Rila National park, Regional, Regional Environment Agencies, Regional Basin Directorate, State Agency for Road Safety (at Council of Ministers), Regional administrations, Local administrations, land owners, Motorway comp., Env. agency.</p> | | |
| | <p>3. Assign legal status and develop coherent regulations for wildlife passages</p> | <p>TRANSPORT, ENVIRONMENT, AGRICULTURE Forestry Spatial planning LAND USE Land ownership/ PRIVATE LAND OWNERS</p> | <p>Ministry of regional development, Road Infrastructure Agency, Ministry of Environment and Waters, Environment agencies</p> | <p>MOEW, Ministry of Agriculture and Forestry, Regional administrations of Sofia, Pernik, Dupnitsa, Regional environment and waters agencies,</p> | |

ANNEX 2 – MAIN SECTORAL STAKEHOLDERS IN THE RILA-VERILA-KRAISTHE CORRIDOR

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| | | | Agricultural ministry Agricultural agencies, | Regional Env Agency Sofia, | |
| | 4. Increase permeability of railway embankments | TRANSPORT, ENVIRONMENT AGRICULTURE Forestry LAND USE Spatial planning | Railway comp., Env. agency. Ministry of Transport, Bulgarian State Railways Company, Ministry of environment, Local Public Authorities | Ministry of Transport Bulgarian State Railways Company Ministry of environment, Regional Env Agency Sofia, | |
| | 5. Ensure permeability on the Bulgarian gas pipelines an interconnected gas services sector | TRANSPORT, ENVIRONMENT ENERGY LAND USE SPATIAL PLANNING GAS PIPELINES | BRUA, Env. agency. Ministry of Energy Bulgargas, Bulgartransgas Ministry of Environment | Ministry of Energy Bulgargas, Bulgartransgas Ministry of Environment | |

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| 2. Increasing barrier effect of existing linear features caused by structural interventions (maintenance, upgrade etc.) | 1. Maintain permeability of existing transport infrastructure | TRANSPORT, ENVIRONMENT AGRICULTURE FORESTRY | Ministry of regional development, Road Infrastructure Agency, Ministry of Environment and Waters, Railway comp., Ministry of Transport, Executive Agency “Automobile Administration”, Motorways EAD(state company Holding Bulgarian State Railways EAD(state company), Local authorities | Ministry of Transport, Ministry of Environment and Waters, Executive Agency “Automobile Administration”, Agency Road Infrastructure, Motorways EAD(state company Holding Bulgarian State Railways EAD(state company), Local authorities | |
| | 2. Maintain the permeability of main river banks at current level | WATER, ENVIRONMENT AGRICULTURE | Water management body, Env. Agencies Ministry of | Ministry of environment, Basin directorate (s) Regional | |

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| | | | environment, Basin directorate (s) Regional environmental agencies, | environmental agencies | |
| | 3. Maintain / increase longitudinal permeability of main river and of its tributaries | WATER, ENVIRONMENT | Water management body, Env. Agencies Regional Environment Protection Agencies Basin Directorates Regional Forestry Agencies Regional Agricultural Agencies Regional Agricultural Advisory Services (extension services) Regional administrations (appointed by government) | Regional Environment Protection Agencies Basin Directorates Regional Forestry Agencies Regional Agricultural Agencies Regional Agricultural Advisory Services (extension services) Regional administrations (appointed by government) Local Administrations | |

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| | | | Local Administrations (elected local authorities, municipalities) State Forestry Enterprises Protected areas administrations | (elected local authorities, municipalities) State Forestry Enterprises Protected areas administrations | |
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| 3. Wildlife mortalities associated with linear infrastructures (including electric power lines) | 1. Implement an adequate fencing system on motorways, including escape gates | TRANSPORT, ENVIRONMENT | Ministry of regional development, Road Infrastructure Agency, Ministry of Environment and Waters, Motorway comp., Env. Agencies State Agency Road Transport Infrastructure Traffic police | State Agency Transport Infrastructure Traffic police | |
| | 2. Direct animals towards functional underpasses | TRANSPORT, ENVIRONMENT | Ministry of regional development, | Motorway comp., Railway comp., Env. Agencies | |

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| | | | Road Infrastructure Agency, Ministry of Environment and Waters, Motorway comp., Railway comp., Env. Agencies State Agency Road Transport Infrastructure Traffic police Environment agencies | State Agency Road Transport Infrastructure Traffic police Environment agencies | |
| | 3. Warning drivers on road-kill / accident-danger areas | TRANSPORT, ? Road Traffic Police | Motorway comp., National roads, County roads, Police State Agency Road Transport Infrastructure Traffic police Environment agencies | State Agency Road Transport Infrastructure Traffic police Environment agencies | |
| | 4. Warning train conductors on road-kill / accident-danger areas | TRANSPORT, ? Road Traffic Police Transport police | Railway comp., Road Traffic Police Transport police (working on trains, has general safety | Railway comp., Road Traffic Police Transport police (working on | |

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| | | | obligations) | trains, general safety obligations) | |
| | 5. Prevent accidents caused by mammals blocked in railway tunnels or on long bridges | TRANSPORT, ENVIRONMENT, | Railway comp., Env. Agencies Road Traffic Police Transport police (working on trains, general safety obligations) | Road Traffic Police Transport police (working on trains, general safety obligations) | |
| | 6. Increase drivers / conductors visibility on roads / railways | TRANSPORT, POLICE, FOREST, AGRICULTURE | Motorway comp., National roads, Railway comp., County roads, Police? State Agency Road Transport Infrastructure Road Traffic Police Transport police (working on trains, general safety obligations) | State Agency Road Transport Infrastructure Road Traffic Police Transport police (working on trains, general safety obligations) | |
| | 7. Special measures to avoid birds' mortalities (powerlines, sound panels) | TRANSPORT, ELECTRIC POWER, ENV. | Power company, Railway comp., Motorway companies | Power companies State Agency Road Transport | |

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| | | | Env. Agency State Agency Road Transport Infrastructure | Infrastructure | |
| | 8. Special measures to avoid bats' mortalities (lighting) | TRANSPORT, ENV. | Motorway companies. Env. Agency State Agency Road Transport Infrastructure | State Agency Road Transport Infrastructure Environment agencies | |
| | 9. Special measures to avoid amphibians & reptiles' mortalities | TRANSPORT, ENV. | Ministry of regional development, Road Infrastructure Agency, Ministry of Environment and Waters, Motorway companies, Environment Agencies State Agency Road Transport Infrastructure Agencies of Ministry of | Motorway companies, Environment Agencies State Agency Road Transport Infrastructure Agencies of Ministry of regional development and public works | |

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| | | | regional development and public works | | |
| | 10. Collect and process data to understand incidents/accidents critical sectors | TRANSP, ENV, POLICE, CITIZEN | Motorway companies, Environment Agencies State Agency Road Transport Infrastructure Scientific institutes NGOs, Citizen science data holders | Motorway companies, Environment Agencies State Agency Road Transport Infrastructure Scientific institutes NGOs, Citizen science data holders | |
| | 11. Create and/or train specialized teams to deal with wildlife-related incidents on motorways, including emergency interventions | POLICE?, ENV. | Road traffic police, Foresters Forest guards, Forestry Agencies/Enterprises, Environment agencies Scientists and researchers NGOs | I.e. Bears on the motorway- Road traffic police, Foresters Forest guards, Forestry Agencies/Enterprises, Environment agencies Scientists and researchers | |

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| | 12. Develop and use an integrated database as decision-supporting tool to address traffic incidents (to implement / adjust measures to prevent wildlife traffic-kills, damages, human casualties) | TRANSP, ENV, POLICE, CITIZEN | Road traffic police, Foresters Forest guards, Forestry Agencies/Enterprises, Environment agencies Scientists and researchers NGOs | NGOs Road traffic police, Foresters Forest guards, Forestry Agencies/Enterprises, Environment agencies Scientists and researchers NGOs | |
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| 4. Reduced landscape permeability caused by <u>changes in land-use</u> | 1. Inforce legislation on changes of land-use towards a less permeable categories | AGRICULTURE, FORESTRY, WATER, ENV, Spatial planning | Agencies of Ministry of Agriculture, Foods and Forestry Agricultural Agencies Forestry Agencies and Enterprises Environment Ministry Ministry of Regional Development and Public Works | Agricultural Agencies Forestry Agencies and Enterprises Agencies of the Environment Ministry including Basin Directorates Local authorities Local branches of the agency of geodesy, | |

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| | | | MRRB (Agency of Geodesy, Cartography and Cadaster at MRRB) | cartography and cadaster | |
| | 2.Facilitate / support changes of land-use toward high permeable categories | AGRICULTURE, FORESTRY, WATER, ENV., EC – subsidy programme? | Agencies of Ministry of Agriculture, Foods and Forestry Agricultural Agencies Forestry Agencies and Enterprises Environment Ministry Ministry of Regional Development and Public Works MRRB (Agency of Geodesy, Cartography and Cadaster at MRRB EC – Common Agricultural Policy, Cohesion Funds | Agricultural Agencies Forestry Agencies and Enterprises Agencies of the Environment Ministry including Basin Directorates Local authorities Local branches of the agency of geodesy, cartography and cadaster | |

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| <p>5a. Reduced landscape permeability caused by <u>land management</u> - fencing</p> | <p>1.Fencing regulations and promoting non-fenced areas</p> | <p>AGRICULTURE, FORESTRY, ENV, EC – subsidy programme</p> | <p>Agencies of Ministry of Agriculture, Foods and Forestry Agricultural Agencies Forestry Agencies and Enterprises Environment Ministry</p> | <p>Agencies of Ministry of Agriculture, Foods and Forestry Agricultural Agencies Forestry Agencies and Enterprises Environment Ministry Local authorities Land owners</p> | |
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| | <p>2. Develop guidelines and impose fencing-related conditions linked with agriculture / forestry subsidies or programmes</p> | <p>AGRICULTURE, FORESTRY, ENV, EC – subsidy programme</p> | <p>Agencies of Ministry of Agriculture, Foods and Forestry Agricultural Agencies Forestry Agencies and Enterprises Environment Ministry Scientists and researchers NGOs</p> | <p>Agencies of Ministry of Agriculture, Foods and Forestry Agricultural Agencies Forestry Agencies and Enterprises Environment Ministry Local authorities Land owners</p> | |
| <p>5b. Reduced landscape permeability caused by <u>land management</u> – crops/vegetation</p> | <p>1. Prevent large-scale monocultures and/or facilitate/support mosaic cultivation</p> | <p>AGRICULTURE, FORESTRY, ENV, EC – subsidy programme</p> | <p>Agencies of Ministry of Agriculture, Foods and Forestry Agricultural Agencies Forestry Agencies and Enterprises Environment Ministry Environment Agencies Scientists and researchers NGOs</p> | <p>Agencies of Ministry of Agriculture, Foods and Forestry Agricultural Agencies Forestry Agencies and Enterprises Environment Ministry</p> | |

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| | | | EC – CAP policy | Environment Agencies Local authorities Land owners NGOs | |
| | | | | EC- CAP policy | |
| | 2.Support adequate management of natural features / marginal habitats | AGRICULTURE, FORESTRY, ENV, EC – subsidy programme | Agencies of Ministry of Agriculture, Foods and Forestry Agricultural Agencies Forestry Agencies and Enterprises Environment Ministry Environment Agencies Scientists and researchers, Ministry of regional development, Road Infrastructure Agency, NGOs EC – CAP policy | Agencies of Ministry of Agriculture, Foods and Forestry Agricultural Agencies Forestry Agencies and Enterprises Environment Ministry Environment Agencies Local authorities Land owners NGOs | |
| 3.Support and promote development of good-practice examples of connectivity- | AGRICULTURE, FORESTRY, ENV, | Agencies of Ministry of Agriculture, Foods and Forestry | Agencies of Ministry of Agriculture, | | |

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| | sensible agriculture and forestry practices | EC – subsidy programme | Agricultural Agencies Forestry Agencies and Enterprises Environment Ministry Environment Agencies Scientists and researchers NGOs EC – CAP policy | Foods and Forestry Agricultural Agencies Forestry Agencies and Enterprises Environment Ministry Environment Agencies Local authorities Land owners NGOs EC- CAP policy | |
| 5c. Reduced landscape permeability caused by <u>land management</u> – degradation of natural habitats | 1.Prevent/control spreading invasive plant & animal species and renaturation of invaded /degraded lands | TRANSPORT, AGRICULTURE, FORESTRY, ENV, | Ministry of Transport, Information Technology and Communications Ministry of Agriculture, Foods and Forestry Ministry of Environment and Waters MOEW | Ministry of Agriculture, Foods and Forestry Ministry of Environment and Waters MOEW Ministry of Transport, Information Technology and | |

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| | | | | Communications Local authorities Land owners | |
| | 2.Prevent/inforce legislation on fire | TRANSPORT, AGRICULTURE, FORESTRY, ENV, | Interior Ministry Ministry of Transport, Information Technology and Communications Ministry of Agriculture, Foods and Forestry Ministry of Environment and Waters MOEW | Agencies of the Interior Ministry, Ministry of Agriculture, Foods and Forestry, of Ministry of Environment and Waters MOEW Ministry of Transport, Information Technology and Communications | |
| | 3.Prevent alteration of water bodies, restore hydric system and support renaturation of wetlands | WATER, AGRICULTURE, FORESTRY, TRANSPORT, ENV, | Ministry of Environment and Waters MOEW Basin Directorates Ministry of Agriculture, Foods and Forestry Environmental NGOs | Agencies of the Environment Basin Directorates Agricultural Agencies Forestry Agencies Forest Enterprises | |

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| | | | | Environmental NGOs | |
| 6a. Reduced landscape permeability caused by other anthropogenic activities – game management | 1. Develop coherent game management plans and apply EIA/AA procedures | HUNTING, ENVIRONMENT FORESTRY LAND USE | Hunting associations, Ministries, Env. agencies, N2000 State Hunting enterprises State enterprises – for forestry | Ministry of agriculture and Forests, Enterprise, Ministry of Environment State Hunting enterprises State enterprises – for forestry South West, local Hunting associations, | |
| | 2. Facilitate data-collection on key-species | HUNTING, ENV FORESTRY Spatial planning Cadaster Citizens NGOs | Hunting associations, Ministries, Env. agencies, N2000, NGOs Public Ministry of environment, Regional agencies of environment, Ministry of agriculture and | Ministry of environment, Regional agencies of environment Ministry of agriculture and Forests, State Hunting enterprises State enterprises – for forestry | |

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| | | | Forests, State Hunting enterprises State enterprises – for forestry South West Enterprise BBF, Balkani Wildlife Society | South West Enterprise BBF, Balkani Wildlife Society, WWF local Hunting associations | |
| | 3. Harmonize game management with Natura 2000 and connectivity-related objectives | HUNTING, ENV FORESTRY, AGRICULTURE, LOCAL STRATEGIES HUNTING, ENV FORESTRY Spatial planning Land use Cadaster Citizens NGOs | Hunting associations, Ministries, Local communities, Env. agencies, N2000, NGOs Public Ministry of environment, Regional agencies of environment, Ministry of agriculture and Forests, State Hunting enterprises State enterprises – for forestry South West Enterprise BBF, Balkani Wildlife Society, WWF local Hunting associations | Ministry of environment, Regional agencies of environment Ministry of agriculture and Forests, State Hunting enterprises State enterprises – for forestry South West Enterprise BBF, Balkani Wildlife Society, WWF local Hunting associations | |

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| | 4. Poaching prevention and control | HUNTING, POLICE, GENDARMERIE, ENV FORESTRY | Hunting associations, Police, Gendarmeries, Env. agencies, N2000, NGOs, Local communities, Public Ministry of Agriculture and Forests – Forest Inspectors and Guards Interior ministry Local authorities | Ministry of Agriculture and Forests – Forest Inspectors and Guards Interior ministry Local authorities Public | |
| 6b. Reduced landscape permeability caused by <u>other anthropogenic activities</u> – human-wildlife conflicts | 1. Facilitate the implementation of legislation on damage compensations | HUNTING, AGRICULTURE, ENV, ENVIRONMENT | Hunting associations, Ministries, Local communities, Env. agencies, N2000, NGOs Ministry of Agriculture and | Ministry of Agriculture and Forests Local hunting associations (under Bulgarian Union of Hunters and Anglers) | |

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| | | | <p>Forests Local hunting associations (under Bulgarian Union of Hunters and Anglers) Ministry of Environment and Waters Env. Agencies NGOs Individual farmers</p> | <p>Ministry of Environment and Waters Env. Agencies NGOs Individual farmers</p> | |
| | 2. Facilitate implementation of traditional shepherding | <p>AGRICULTURE, LAND USE LAND OWNERSHIP</p> | <p>Hunting associations, Ministries, Local communities, Env. agencies, N2000, NGOs Ministry of Agriculture and Forests Agricultural producers' associations Ministry of environment Individual farmers</p> | <p>Ministry of Agriculture and Forests Agricultural producers' associations Ministry of environment Individual farmers</p> | |
| | 3. Facilitate implementation of | <p>AGRICULTURE,</p> | <p>Hunting associations,</p> | <p>Ministry of</p> | |

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| | modern methods for prevention | ENV, | Ministries, Local communities, Env. agencies, N2000, NGOs Ministry of Agriculture and Forests Agricultural producers' associations Ministry of environment Individual farmers | Agriculture and Forests Agricultural producers' associations Ministry of environment Individual farmers | |
| | 4. Facilitate increased subventions based on large carnivores' conservation | AGRICULTURE, ENV | Hunting associations, Ministries, Local communities, Env. agencies, N2000, NGOs Ministry of Agriculture and Forests Agricultural producers' associations Ministry of environment Individual farmers | Ministry of Agriculture and Forests Ministry of environment Individual farmers Local hunting associations (under Bulgarian Union of Hunters and Anglers) | |

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| | | | Local hunting associations (under Bulgarian Union of Hunters and Anglers) | | |
| | 5. Regulate other anthropogenic activities which favor conflicts | ENV, TRANSPORT LAND USE HUNTING | Hunting associations, Ministries, Local communities, Env. agencies, N2000, NGOs Ministry of Agriculture and Forests – Forest Inspectors and Guards Agricultural producers’ associations Ministry of environment Individual farmers Local authorities Local hunting associations (under Bulgarian Union of Hunters and Anglers) Interior ministry – | Ministry of Agriculture and Forests – Forest Inspectors and Guards Agricultural producers’ associations Ministry of environment Individual farmers Local authorities Local hunting associations (under Bulgarian Union of Hunters and Anglers) | |

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| | | | police, gendarmerie | | |
| | 6. Facilitate rapid intervention in special situation related with wild animals | GENDARMERIE, HUNTING, ENV FORESTRY | Hunting associations, Ministries, Local communities, Env. agencies, N2000, NGOs Interior ministry – police, gendarmerie Ministry of Agriculture and Forests – inspectors and guards Agricultural producers’ associations Ministry of environment Individual farmers Local authorities Local hunting associations (under Bulgarian Union of Hunters and Anglers) | Ministry of Agriculture and Forests Agricultural producers’ associations Ministry of environment Individual farmers Local authorities Local hunting associations (under Bulgarian Union of Hunters and Anglers) | |

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| <p>7. <u>Lack of coherent monitoring and adaptation</u></p> | <p>1. Develop an integrated monitoring programme – procedures, database, indicators, assessment</p> | <p>ENV, TRANSPORT, HUNTING, AGRI?.FOREST? – EU subsidies?</p> | <p>Ministries, Local communities, Env. agencies, N2000, NGOs Interior ministry – police, gendarmerie Ministry of Agriculture and Forests – inspectors and guards Agricultural producers’ associations Ministry of environment Individual farmers Local authorities Local hunting associations (under Bulgarian Union of Hunters and Anglers)</p> | <p>Addressed by WP1</p> | |
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| <p>8. Reduced support from stakeholders at landscape level for an integrated ecosystemic approach</p> | <p>1. Facilitate networking and develop a common platform and database</p> | <p>ALL</p> | <p>Ministries, Local communities, Env. agencies, N2000, NGOs Ministries of Transport, Energy, Environment, Agriculture xxxxxxx Interior ministry – transport traffic control police Ministry of Agriculture and Forests – inspectors and guards Agricultural producers’ associations Individual farmers Local authorities Local hunting associations (under Bulgarian Union of Hunters and Anglers) NGOs</p> | <p>CCIBIS, GreenWeb IENE GreenWeb – regional Working group of IENE in SE Europe Pan European Green Corridor Network (PEGNet) Balkan Mammal Network Secretariat of Carpathian Convention, Secretariat of the ICPDR, IUCN, Balkan Green Belt, the southernmost section of the European Green Belt, EEA-European Environment Agency</p> | |
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| | | | | EU agencies and councils agriculture, forestry, rural development | |
| | 2. Facilitate information, awareness, education, communication | ALL | Ministries, Local communities, Env. agencies, N2000, NGOs Ministries of Transport, Energy, Environment, Agriculture xxxxxxxx Interior ministry – transport traffic control police Ministry of Agriculture and Forests – inspectors and guards Agricultural producers’ associations Individual farmers Local authorities Local hunting | Bulgarian NGOs (SaceGREEN partners), resources and partner from HARMON, Connect GREEN, (project and agencies above) Bulgarian environmental, transport and agricultural authorities | |

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| | | | associations (under Bulgarian Union of Hunters and Anglers) NGOs | | |
| | 3. Support research and studies; inter-sectoral capacity building and facilitate development of new labour opportunities | ALL | Universities and research Administrations Ministries of environment, agriculture and forests, transport, | University of Sofia 'St. Kliment of Ochrid' University of Plovdiv University of Stara Zagora University of Forestry, Sofia University of Architecture, Civil Engineering and Geodesy, Sofia Institutes of the Bulgarian Academy of Science And the ministries and agencies | |

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| | <p>4. Develop a regional identity and promote the area – nature, culture, services</p> | <p>Local/regional communities, N2000 Local administrations and agencies of Ministries of environment, agriculture and forests, transport</p> | <p>Local/regional communities, N2000 NGOs Local administrations and agencies of Ministries of environment, agriculture and forests, transport</p> | <p>Local administrations of nearby places to the pilot site NGOs- Bulgarian Biodiversity Foundation BSNN Green Balkans Federation Balkani Wildlife Society WWF Bulgaria</p> | |
| | <p>5. Facilitate development & alignment of local sustainable development strategies into regional sectoral strategy</p> | <p>Local/regional communities, N2000 Local administrations and agencies of Ministries of environment, agriculture and forests, transport</p> | <p>Local/regional communities, N2000, NGOS Ministries and Regional Environment Protection Agencies Basin Directorates Regional Forestry Agencies Regional Agricultural Agencies Regional Agricultural Advisory Services (extension services)</p> | <p>Local administrations of nearby places to the pilot site NGOs- Bulgarian Biodiversity Foundation BSNN Green Balkans Federation Balkani Wildlife Society WWF Bulgaria</p> | |

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| | | | Regional administrations (appointed by government) Local Administrations (elected local authorities, municipalities) State Forestry Enterprises Protected areas administrations | | |
| | 6.Facilitate / support sustainable development initiatives | Local/regional communities, N2000 Local administrations and agencies of Ministries of environment, agriculture and forests, transport | Local/regional communities, N2000 Local administrations and agencies of Ministries of environment, agriculture and forests, transport | Local administrations of nearby places to the pilot site NGOs- Bulgarian Biodiversity Foundation BSNN Green Balkans Federation Balkani Wildlife Society WWF Bulgaria | |

ANNEX 3 RILA – VERILA – KRAISHTE CORRIDOR PILOT AREA OVERVIEW

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| Pilot Area: | Rila – Verila – Kraishte Corridor SaveGREEN |
| Country: | Bulgaria |
| Type/trans-national: | National |
| Project Partners: | BBF (Bulgarian Biodiversity Foundation), BSNN (Black Sea NGO Network), BG |

1. Short description of the Pilot Area / relevance:

- The pilot area in Bulgaria located in the deep Dupnitsa Valley drained by the Struma River and tributaries and flanked by the mountains Rila, Verila and some other ranges to the south west of the capital Sofia. A 16-kilometer stretch of Lot 1 of the Struma Motorway, with 15 facilities for wildlife (3 of them large – overpass, viaduct and underpass), runs across it. Their effectiveness and sufficiency as mitigation measures, individually and as an integrated system for limiting the fragmentation effect, can be addressed by the project and improvements suggested.
- The area is important as case study/pilot area because it is highly fragmented being at the same time on the route of important ecological corridors – three of the main ecological corridors in Bulgaria and some local migratory routes in the mountain area. It is significant for migration of large and medium size mammals (brown bear, jackal, wolf, fox, wild cat, roe deer, wild boar, marten, badger etc.) inhabiting adjacent mountains and protected areas. The area is described as a bottle neck from ecological point of view in the Bulgarian road and rail road network (Van der Grift at al. 2009).

Despite of this there is limited data of the species occurrence and distribution and how fragmentation influences their populations. Nevertheless, mitigation measures were prescribed and partially implemented. The area has two distinct patches: in the first one the predominant landscape is arable land and pastures, influenced by settlements and industrial activities; in the second patch forests fragmented by pastures are the dominant feature. Large open areas and the proximity of settlements, grazing, poaching and linear transport infrastructure are factors influencing the fragmentation. The stretch is a conflict point of motorway, parallel 1st class road, country roads, railroad, and further mitigation measures are necessary.

- Large number of Natura 2000 sites are present. East of the corridor is Rila –Verila region. This is a non-fragmented mountain range of Rila, Verila and Vitosha mountains with 5 SCIs Rila BG0000495 (National Park Rila), Rilski manastir BG0000496, Niska Rila BG0000636, Verila BG0000308, Vitosha BG0000113– protecting key breeding populations of brown bear and wolf. West of the corridor is Kraishte region with number of SCIs. SCI Konyavska planina BG0000298 also protecting breeding wolf population, and where occasional migration of brown bear is noted. The last site play role as stepping stone towards an unfragmented Kraishte mountain range and number of SCIs there situated near or at the border with the Serbia and Northern Macedonia - Zemen BG0001012, Karshalevo BG0000294, Karvav kamak BG0001017, Osogovska planina BG0001011, Ruy BG0000313. In Kraishte there are breeding populations of wolf and lynx and potential bear habitats (the last species is restricted there due to high level of poaching). The project area is the only potential bio corridor between mountain ranges of Rila-Verila and for providing connectivity for wolf and for spreading and restoration of populations of bear and lynx in their historical range.
- The area is fragmented by Lot 1 of the Struma Motorway with heavy traffic associated with proximity of the capital and some busy smaller roads as well as a railroad. Intensively used agricultural lands

and pastures, 4 towns and 28 villages in the wider area. These are considerable barriers for wildlife. It is a mountain area crossed by the motorway, local road and railway and surrounded by mixture of shrubby pastures, arable lands and small patches of forest. In the close vicinity (several hundred meters to 5-6 km) from both sides are situated forested mountain slopes and thus providing potential possibility for restoration of connectivity between SCIs situated west and east of the area.

- The mitigation measures implemented on the 16 -km Lot 1 of the Struma Motorway in the form of system for improved wildlife crossings and fences aiming to reduce wildlife and human mortality – can be regarded as part of the measures necessary to mitigate the negative effects of fragmentation. The main facilities include: an ecoduct for large mammals at km 314+070; a subway for small and middle mammals at km 315+900; a non-specialized viaduct at km 314+400; bridges with dry paths, tube culverts for reptiles and amphibians, rabbit fences and guiding concrete fences for amphibians. The Functionality and effectiveness of the facilities, the technical state of the facilities and their functioning so as to achieve functional connectivity of the landscape can be studied and assessed as part of the project.
- The measures developed by SaveGREEN partners under other projects e.g. TRANSGREEN should be studied and adapted to the local conditions in Bulgaria. As the Struma Motorway is part of the TEN-T network their significance is essential for the mitigation effect.
- The measures identified for the pilot area in Bulgaria need to be integrated in operational plans and programmes to become effective and functional.
- The main sectors of interest during SaveGREEN are transport and spatial planning, also agriculture, forestry, hunting.

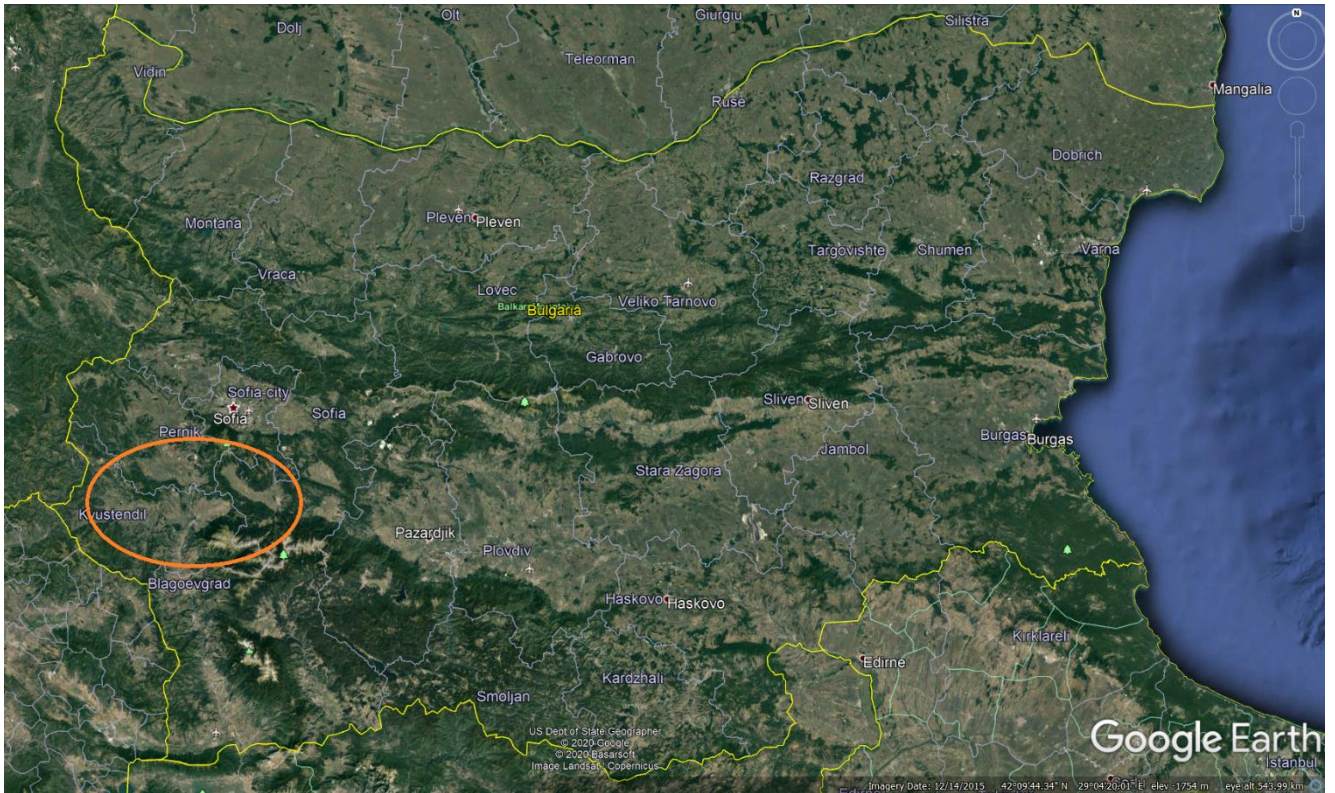


Figure 01: Map of the Pilot area on the map of Bulgaria, credit Google Earth

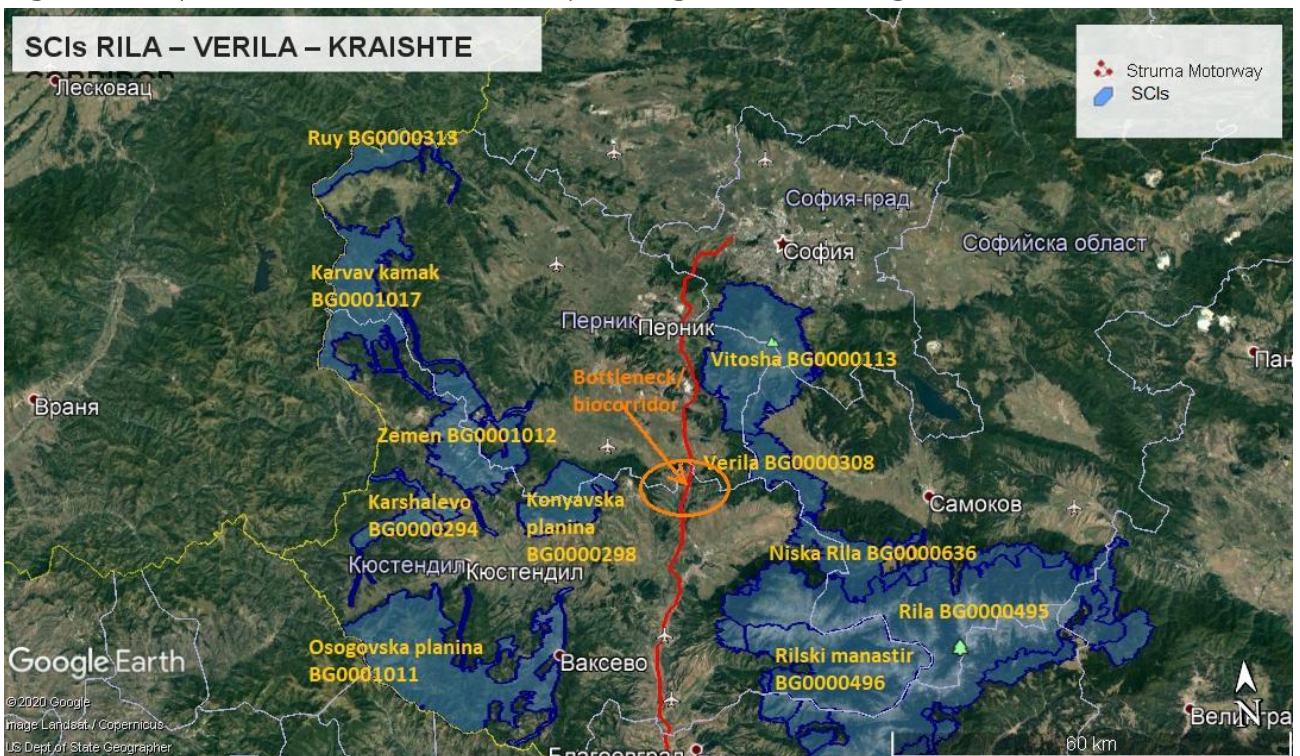


Figure 02: General overview of the pilot area including SCIs and Struma motorway Lot 1, credit Google Earth

Table 1 :List of Natura 2000 sites (SCIs only) and protected areas (national and nature parks) in the pilot-area

| NAME and CODE of protected area | Type | Protected area category |
|---------------------------------|------|-------------------------|
| Vitosha BG0000113 | SCI | Nature Park |
| Verila BG0000308 | SCI | |
| Reka Palakaria BG0000617 | SCI | |
| Rila BG0000495 | SCI | National park |
| Niska Rila BG0000636 | SCI | |
| | | |
| Rilski manastir BG0000496 | SCI | Nature Park |
| | | |
| Konyavska planina BG0000298 | SCI | |
| Osogovska planina BG0001011 | SCI | |
| Zemen BG0001012 | SCI | |
| Karshalevo BG0000294 | SCI | |
| Karvav kamak BG0001017 | SCI | |
| Ruy BG0000313 | SCI | |

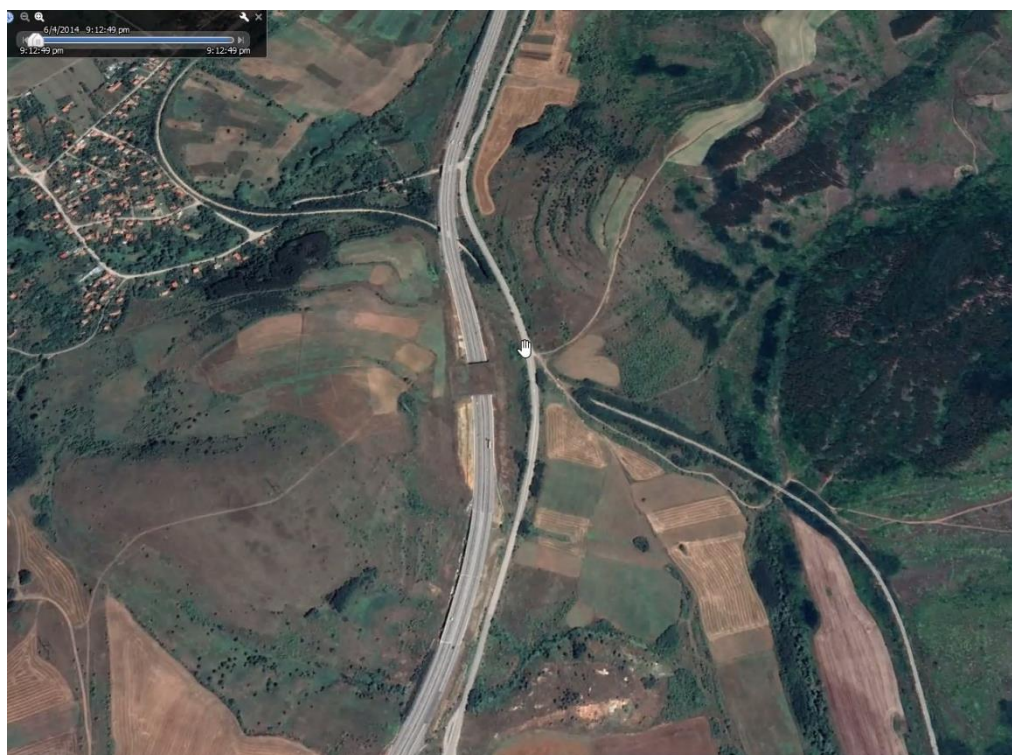


Figure 03: Google Earth image of the ecoduct for large mammals over the Struma Motorway with conflicting 1st class road and railroad, credit Google Earth

2. Typical species which could be affected by transport infrastructure in the Struma Highway Lot 1 pilot-area

| Group / type of species | Species |
|-------------------------|---|
| Large carnivores | Brown bear (<i>Ursus arctos</i>), Grey wolf (<i>Canis lupus</i>), Golden jackal (<i>Canis aureus</i>) |
| Large herbivores | Red deer (<i>Cervus elaphus</i>) Wild-boar (<i>Sus scrofa</i>) |
| Medium-size mammals | Roe deer (<i>Capreolus capreolus</i>), Red fox (<i>Vulpes vulpes</i>), European otter (<i>Lutra lutra</i>), European badger (<i>Meles meles</i>), European wildcat (<i>Felis silvestris</i>), European hare (<i>Lepus europaeus</i>), beech marten (<i>Martes foina</i>), European pine marten (<i>Martes martes</i>) |
| Small size mammals | Red squirrel, polecat, hedgehog, stoat, least weasel, dormice, Common Vole |
| Bats | Greater mouse-eared bat (<i>Myotis myotis</i>), Lesser horseshoe bat (<i>Rhinolophus hipposideros</i>), barbastelle (<i>Barbastella barbastellus</i>) |
| Reptiles and Amphibians | smooth newt (<i>Lissotriton vulgaris</i>), yellow-bellied toad (<i>Bombina variegata</i>), common toad (<i>Bufo bufo</i>), green toad (<i>Bufo viridis</i>), European tree frog (<i>Hyla arborea</i>), agile frog (<i>Rana dalmatina</i>), marsh frog (<i>Pelophylax ridibundus</i>), European pond turtle (<i>Emys orbicularis</i>), spur-thighed Tortoise (<i>Testudo graeca</i>), hermann's Tortoise (<i>Eurotestudo hermanni</i>), green lizard (<i>Lacerta viridis</i>), sand lizard (<i>Lacerta agilis</i>), common wall lizard (<i>Podarcis muralis</i>), meadow lizard (<i>Darevskia praticola</i>)slow-worm (<i>Anguis colchica</i>), Aesculapian snake (<i>Zamenis longissimus</i>), grass snake (<i>Natrix natrix</i>), smooth snake (<i>Coronella austriaca</i>), caspian whipsnake (<i>Dolichophis caspius</i>), horned viper (<i>Vipera ammodytes</i>), |
| Invasive species | <i>Amorpha fruticosa</i> , <i>Robinia pseudoacacia</i> , <i>Ailanthus altissima</i> etc. |

3. Relationship with other EU-funded projects:

| Project | Funded by | Status | Relevant Actions | Relation with SaveGREEN |
|---------------|------------------|-----------|---|------------------------------------|
| HARMON | DTP Small Grants | Completed | Green corridors and transport infrastructure issues and planning for mitigation measures in general terms | Preparatory activity for SaveGREEN |

4. Description of the landscape elements

The Rila – Verila – Kraishte Pilot Area is an area of agricultural lands, pastures and forested areas in a deep valley between mountains, drained by tributaries of the Struma River, fragmented by transport, human settlements and heavy used agriculture areas in the basin.

According to the analysis based on PACS approach (Pilot area classification 1.0 by Roland Grillmayer and Radu Mot), the area in Bulgaria has the following characteristics:

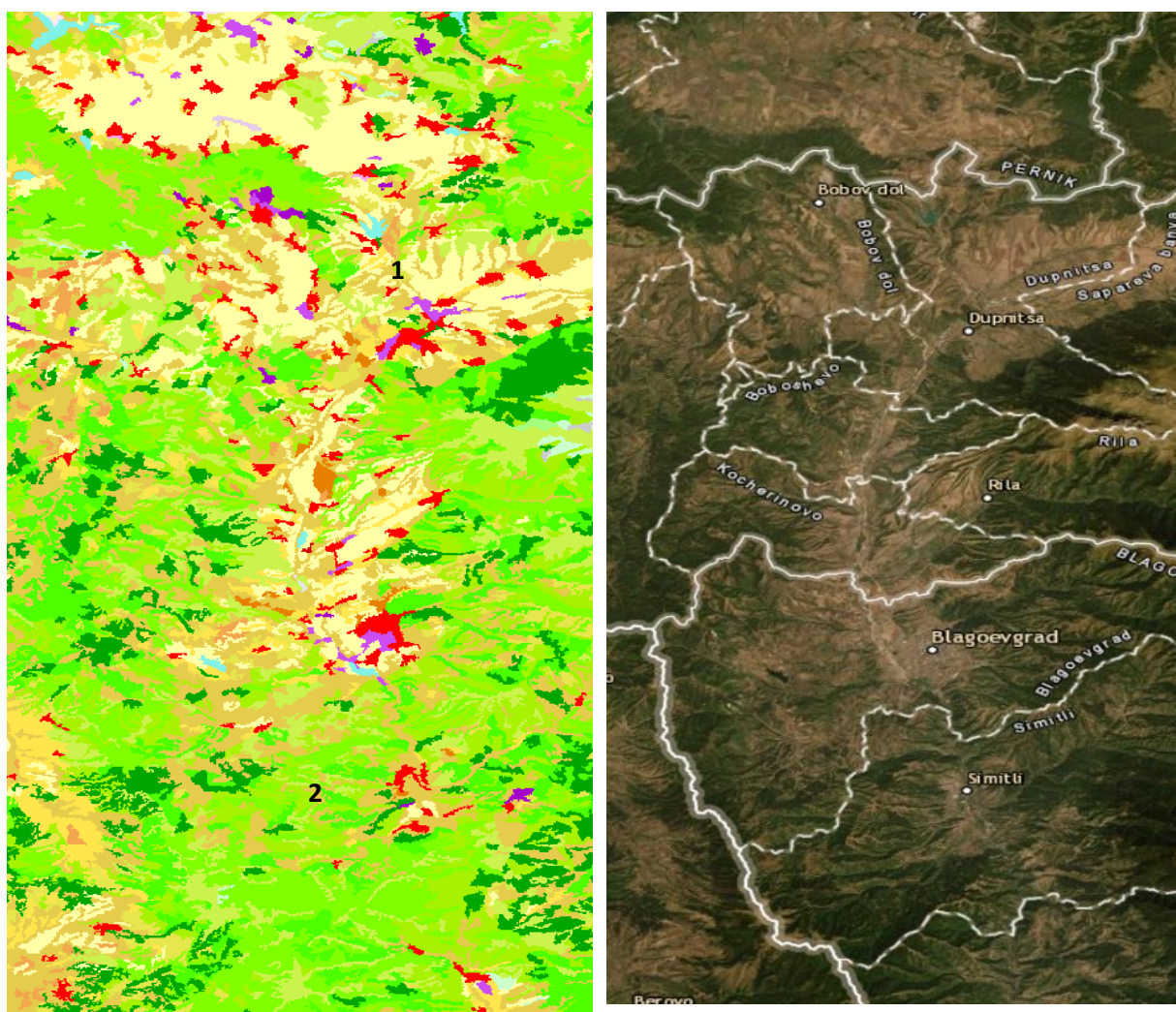


Figure 04: Bulgarian pilot area, credit SaveGREEN

Within area 1 of the Bulgarian pilot area the dominate CLC land cover class is “21 Arable land” which forms the landscape matrix. From north to the south the proportion of CLC land cover class “23 Pastures” and build together with the CLC class “21 – Arable land” a complex landscape mosaic. Furthermore, the landscape is characterized by medium and large settlements patches (CLC class 11), some industrial activities (CLC class 12 - Industrial, commercial and transport units) class as well as some forests patches (CLC class 31 – forests).

Within area 2 of the pilot area the CLC class 31 – forests dominate the landscape and build up the landscape matrix. Embedded in these matrix especially large fractal patches of CLC class 23 - Pastures and some isolated settlements patches (CLC class 11 – Urban fabric) are characteristic for this landscape area.

5. List of the main linear infrastructures that require attention during SaveGREEN

(as they are not visible in CORINE)

- Lot 1 of the Struma Motorway
- Parallel 1st class road
- Intersecting country roads
- National rail road

6. List of Sectors to be addressed in SaveGREEN

- Transport (motorway, railways, roads)
- Agriculture
- Forestry
- Hunting and human-wildlife conflicts
- Water management
- Natura 2000 sites

7. Group of species relevant for SaveGREEN

- Mammals (large carnivores and herbivores, and medium-size mammals)
- Reptiles
- Amphibians