

LIFE SAFE-CROSSING

ACTION A4. ANALYSIS AND MAPPING OF EXISTING CROSSING STRUCTURES FOR POTENTIAL USE BY THE TARGET SPECIES AND OTHER INTERVENTIONS ON THE ROADS

ACTION REPORT/2020- ANDALUCÍA

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1. INTRODUCTION

The main goal of the action was to evaluate the visibility of the selected road segments concerning the possibility for the drivers to detect an animal approaching the road. In Andalusia the data collected in previous projects have shown that often Iberian roadkills occurred where the visibility for drivers was very limited. The action was therefore implemented along the most critical segments selected on the basis of action A3 results, as well as on the basis of previous collected data and the experience of the technical local staff .

Even if was not foreseen in the project proposal, in the frame of the action, as was done in the other countries, we also monitored the use of 17 crossing structures located in the selected road segments, where the “visibility” analysis was carried out

The action A4 lasted from March 2019 to September 2020. This action is a preparatory action for the implementation of the interventions foreseen in action C2,

2. PROJECT AREA

In the project area the action was carried out in 6 road segments: 2 in Doñana area (A-481, SE-MA01), and 4 in Sierra Morena area (A-421,A-3000, A-3001, CO-3103). These road segments are the same monitored in Action A5 except the road segment of A-3000.

The total length of the monitored road segments is 77,5 Km, 26,6 Km in Doñana area, and 51,1 Km in Sierra Morena area (table 1).

Road code/nr.	Length of road segment (Km)
A-3000	9,77
A-3001	14,84
A-421	18,93
A-481	14,78
CO-3103	11,73
SE_MA-01	7,46

Table 1. Length of the monitored road segments.

3. METHODS

The 77,5 Km of the selected road segments were classified in 3 different categories according to the possibility for the drivers to detect an animal approaching the road. The categorization was made considering the distance of the vegetation on the ditches from the roadside. Category 0 includes those segments of road where the vegetation on the ditches is less than 2 metres from the road edge (MIMIMUM VISIBILITY). Category 1 includes those segments of the road where the vegetation is between 2 and 5 metres from the roadsides (LOW VISIBILITY). And finally, category 2

is for those sections where the vegetation is more than 5 metres from the road margins (GOOD VISIBILITY).

The field work to categorize the selected road segments was carried out in the period from July 2019 to February 2020.

In the frame of this action we monitored the use of 17 crossing structures in the following road segments: A-481, A-421 and CO-3102. These 17 infrastructures were categorized according to the recommendations and characterization protocol defined in the "Handbook Wildlife and Traffic". The characteristics and the location of the 13 crossing structures in the A-481 road segment are shown in table 2 and figure 1. The use of the crossing structures was assessed through specific field inspections to detect and classify the animal tracks.

MATRÍCULA VIA	COD. ESTRUCT.	TIPO ESTRUCTURA	USO_INICIAL ESTRUCTURA	USO_ACTUAL ESTRUCTURA	SECCIÓN ESTRUCTURA	COMPOSICIÓN	POSEE ADECUACIONES	ADECUACIONES FAUNA 1	ADECUACIONES FAUNA 2	ADECUACIONES FAUNA 3	ALTURA (m.c.m)	DIÁMETRO (m.c.m)	ANCHURA (m.c.m)	LONGITUD (m.c.m)	ÍNDICE DE APERTURA
A-481	A-481065 80	PASO INFERIOR	PASO AGUA	PASO AGUA	PORTICADO	SIMPLE	SI	SUELO PLANO HORMIGONADO	VALLADO PERIMETRAL		1,1		3,2	11,5	0,3061
A-481	A-481050 00	PASO INFERIOR	PASO AGUA	PASO AGUA	CUADRANGULAR	TRIPLE	SI	VALLADO PERIMETRAL			4		7,4	13	4,4226
A-481	A-481060 70	PASO INFERIOR	PASO AGUA	PASO AGUA	PORTICADO	SIMPLE	SI	VALLADO PERIMETRAL			2		3	12,45	0,4819
A-481	A-481134 90	PASO INFERIOR	PASO AGUA	PASO AGUA	CUADRANGULAR	SIMPLE	SI	VALLADO PERIMETRAL	VEGETACIÓN ENCAUCE	SUELO PLANO HORMIGONADO	2,55		5	14,65	0,8703
A-481	A-481118 00	PASO INFERIOR	PASO AGUA	PASO AGUA	CIRCULAR	SIMPLE	SI	VALLADO PERIMETRAL			1,8	1,8	1,8	24	0,1350
A-481	A-481119 00	PASO INFERIOR	PASO AGUA	PASO AGUA	CIRCULAR	SIMPLE	SI	VALLADO PERIMETRAL			1,8	1,8	1,8	24	0,1350
A-481	A-481119 60	PASO INFERIOR	PASO AGUA	PASO AGUA	CIRCULAR	SIMPLE	SI	VALLADO PERIMETRAL			1,8	1,8	1,8	24	0,1350
A-481	A-481124 20	PASO INFERIOR	PASO CAMINO VEHICULOS	PASO CAMINO VEHICULOS	CUADRANGULAR	SIMPLE	SI	VALLADO PERIMETRAL			3,5		5	14	1,2500
A-481	A-481124 40	PASO INFERIOR	PASO AGUA	PASO AGUA	CIRCULAR	SIMPLE	SI	VALLADO PERIMETRAL			1,8	1,8	1,8	28	0,1157
A-481	A-481126 00	PASO INFERIOR	PASO AGUA	PASO AGUA	CIRCULAR	SIMPLE	SI	VALLADO PERIMETRAL			1,8	1,8	1,8	20	0,1620
A-481	A-481140 20	PASO INFERIOR	PASO FAUNA	PASO FAUNA	CUADRANGULAR	SIMPLE	SI	VALLADO PERIMETRAL			2		3	20	0,3000
A-481	A-481161 25	PASO INFERIOR	PASO CAMINO VEHICULOS	PASO CAMINO VEHICULOS	CUADRANGULAR	SIMPLE	SI	VALLADO PERIMETRAL			3,5		5	15,5	1,1290
A-481	A-481162 00	PASO INFERIOR	PASO AGUA	PASO AGUA	CIRCULAR	SIMPLE	SI	VALLADO PERIMETRAL			1,8	1,8	1,8	22	0,1473

Table 2. Characteristics of the crossing structures in the A-481 road segment.



Figure 2. “Visibility” categories in the monitored road segments in the Doñana area: red=Minimum Visibility, orange=Low Visibility, green=Good Visibility.

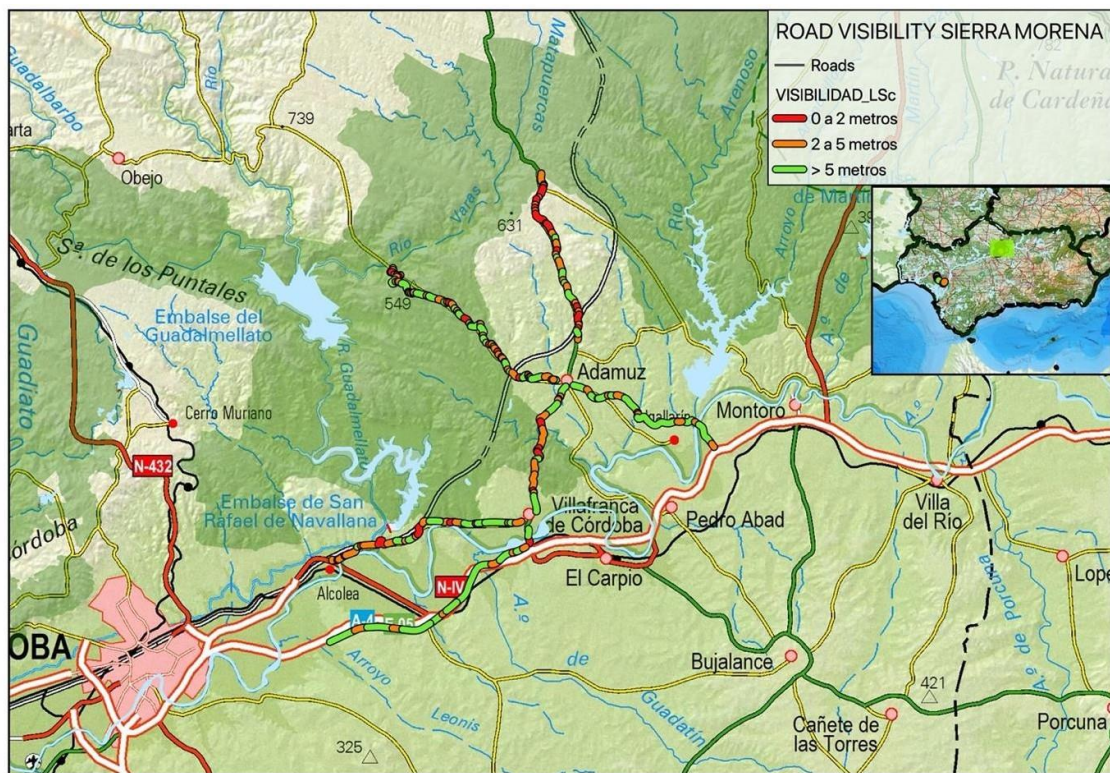


Figure 3. “Visibility” categories in the monitored road segments in the Sierra Morena area: red=Minimum Visibility, orange=Low Visibility, green=Good Visibility.

From July 2019 to August 2020, 27 monitoring sessions were carried out to monitor the use of the 17 crossing structures: 14 sessions were made in the A-481 road, 8 sessions in the CO-3102 road and the A-421 road, and 5 sessions on the A-3001 road.

Overall 39 signs of carnivores were detected, 27 in the crossing structures of A-481 road segment, the remaining 12 in the crossing structures of the A-421 (n=9) road segment and of the CO-3102 (n=3) road segment. In the crossing structures of the A-421 road, the tracks of the following species were recorded: lynx, dog, cat, badger and civet; while the tracks of lynx, fox, civet, mongoose and badger were detected in the crossing structures of the road segments of Sierra Morena area.

5. FINAL CONSIDERATIONS

The action was successfully implemented, and we were able to monitor 77,5 Km of roads respect to 53 Km indicated in the project proposal.

The results obtained allowed to plan the extent of the interventions to be carried out in action C2. The cutting and management of the vegetation will be carried out for all the length of the stretches of the road segments classified in the categories minimum and low visibility. The vegetation clearance will be done on the 8 meters of public domain on both road sides.

During the rest of the project we will also continue the monitoring of the use of the crossing structures.