

ANTHROPOLOGICAL MUTATIONS INDUCED BY THE CONSTRUCTION OF SEBEŞ-TURDA HIGHWAY

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ABSTRACT: Oarda neighborhood is located on the left side of Mureş river, close to the junction with Sebeş river. It is a part of Alba Iulia municipality administration. It is formed from two main parts Down Oarda (Oarda de Jos) and Up Oarda (Oarda de Sus). The layout of the highway Sebeş-Turda begins in Sebeş and follows the river sides of Sebeş river and Mureş river. In Oarda area, the high way gets to the inhabited area close to 15 m. This has a huge impact on people's life style and properties.

Key words: highway; protecting the population; anthropological mutations; pollution;

Located on the left bank of Mures river, Oarda is also close to the junction with Sebeş river. The town belongs to Alba Iulia city (fig. 1). After an old administrative sharing, Oarda was divided into two parts: Down Oarda (Oarda de Jos) and Up Oarda (Oarda

de Sus). During middle age, the documents show for Oarda as a single unit Warda (1290-1301). Only during Austrians there were mentioned two settlements with their Hungarian names: Also Maros Varadya, Felso Maros Varadya. The villages were



Fig. 1. Alba Iulia City Map

ruled by a mayor elected between the well seen villagers. The mayor was helped by the old people of the village, named councillors and formed the committee of the village. The town hall used to decide when the villagers had to gather up and all the mayor's decisions were spread by the drum man. He was walking through the village, banging the drum and shouting loud and clear all the news.

The city of Alba Iulia has as components to the main city the following Miceşti, Bărăbanţ, Pâclişa, and Oarda (both Up and Down parts). Oarda is 6 km far away distance to Alba Iulia.

The beginning of the layout Sebeş-Turda is on the administration territory of Sebeş city, through Lancram town, crosses Sebeş River on a bridge and enters in the administrative area of Alba Iulia city. The layout goes through the plain zone of Sebeş river and then Mures river, passes valleys and hills, again on a bridge over Negru Valley and through a passageway crosses the road that connects Up Oarda with Down Oarda (fig. 2).

For negative impact analysis the project proposed measures for Enviromental

protection:

1. Measures for protecting the people against the noise such as phonic panels close to inhabited areas where the high level admitted is over 50 dB.
2. measures for protecting the animals with wire fences 1. 5-1. 8 m high.
3. Measures for protecting the water quality and soil quality with collection basins.

The impact of the project evinces throughout the execution and function, over the health of the inhabitants, flora and fauna, over the properties, water and air quality, noise, vibrations, historical and cultural patrimony.

Air pollution sources

The inhabited areas will be affected all throughout the execution and function of the highway. All the activities due by the construction will effect the nearby inhabitants with noise and air pollution. During the using of the highway, the pollution level will be huge for those living nearby (fig. 3).



Fig. 2. The route of highway Sebeş-Turda



Fig. 3. The air pollutin in Sebeș

During the construction there will be a lot of traffic of heavy machines which provide CO,CO₂,SO₂. Due to the nature of this construction it is impossible to provide protection against pollution.

Noise and vibrations sources

The construction faze of the highway will provide a lot of noise and vibrations because of the transportation for all the material needed, using of the materials, using of heavy cars and machines (fig. 4, table 1). Heavy cars generate 75 dB to 90 dB in normal using to a distance of 15 m.

-transportation cars	75-85
-heavy lorry	75-85
-excavator	80-90
-bulldozer	80-90

The impact on flora and fauna

The layout of the highway Sebeș-Turda goes through a variety of bionatural ecosystem and protected natural area which is located on a side of the layout.

During the construction of the highway, the flora and fauna nearby will be affected by the noise and air pollution. This impact can be reversed after the finishing of the construction and measures for protecting the environment will be taken (fig. 5).

Measures for protecting against the noise and vibrations

During the construction of the highway there will be measures taken for noise protection. Any work done at less than 200 m distance from the houses need to have noise protecting panels, the high noise machines will be replaced with the screen protective ones.



Fig. 4. Transport and construction, noise and vibrations sources

Table 1. Transport distances

Nr.	Town	Positon	Distance from highway to town (m)
1	Lancrăm Sebeş	0+000 - 0+100 right	140
2	Lancrăm Sebeş	0+450 - 0+650 right	200
3	Lancrăm Sebeş	0+700 - 0+850 right	350
4	Lancrăm Sebeş	2+900 - 3+200 right	50-65
5	Oarda Alba Iulia	5+100 - 5+700 right	25
6	Oarda Alba Iulia	5+23 0- 6+200 left	15-25
7	Oarda Alba Iulia	6+650 - 7+150 right	100-150



Fig. 5. Affecting fauna and flora

References

1. Bulbucan, Mioara; Cibu, Maria, *Sebeș, oraș "sufocat" de traficul rutier*, in rev. PANGEEA, nr. 9, Ed. Aetrernitas, Alba Iulia, 2009.
2. Costea, Maria Viorela, *Sebeșul și problemele de mediu*, in rev. PANGEEA, nr. 16, Ed. Aetrernitas, Alba Iulia, 2016.
3. Cucu, V., *Geografia populațiilor și așezărilor omenești*, Editura Didactică și Pedagogică, București, 1981
4. Moga, V., *De la Apulum la Alba Iulia, fortificațiile orașului*, Editura Sport Turism, București, 1987.
5. Suci, C., *Dicționarul istoric al localităților din Transilvania*, vol. 2, Editura Academiei, 1967
6. Compania Națională de Autostrăzi și Drumuri Naționale, *Memoriu de prezentare-Autostrada Sebeș-Turda*.
7. Google Earth.