

# ENVIRONMENTAL SAFETY AND SUSTAINABLE DEVELOPMENT IN SERBIA

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**Abstract:** *We are not allowed to violate the harmony of nature. Men's needs in the space are great and require the change of our attitude to the environment. The time has come for a green development. Competent bodies state that financing of environmental protection has significantly increased from year 2006 till today. In Serbia the development should be moving toward the sustainable development and the protection of environment we live in, as well as energy efficiency with utilization of renewable sources.*

*The importance of environmental aspects of traffic taking into consideration the well known fact how much cars reduce air quality in cities by emission of harmful gases and negatively influence on the ozone layer, as well as on the climate changes throughout the planet is great. Simultaneously the Agency for environmental protection has established in Serbia the state system for automatic monitoring of the quality of air we inhale.*

**Keywords:** ENVIRONMENT, POLLUTION, SAFETY, SERBIA.

## 1. Introduction

We are not allowed to violate the harmony of nature. The importance of environmental aspects of traffic taking into consideration the well known fact how much cars reduce air quality in cities by emission of harmful gases and negatively influence on the ozone layer, as well as on the climate changes throughout the planet is great.

In the previous year the sale of cars in Serbia was 20% lower, i.e. in our country during year 2011 around 32.000 cars were sold<sup>1</sup> what represents the fall of 20% comparing to year 2010 in spite of the fall of customs rate on 2,5% for cars imported from European Union. The sale of used cars was also lower for almost one quarter. Although the manifestation "Car show 2012" on the Belgrade Fair was not held, the highest sale on the Serbian market of cars had „Fiat“, „Škoda“, „Dacia“, „Hyundai“, „Opel“ etc, while the leader of sale in Europe is Volkswagen group<sup>2</sup>.

Possibility for access of public to all information relating to environment, especially in November 2011, when in surrounding countries, Austria, Slovenia, Czech Republic and the Republic of Slovakia increased level of radioactivity was found, meant a lot. Our country rejoined CERN, European Center for Nuclear Research<sup>3</sup> (the biggest scientific institution in the world near Geneva in whose foundation took part), after signing the contract<sup>3</sup> on the 10-th of January 2012.

In connection with environmental pollution all over the world in this paper some of the world experiences, as well as domestic experience are cited.

## 2. World experiences

In China the capital city Beijing (Peking in Serbian) is famous by the high air pollution. The efforts of authorities to reduce the emission of harmful gases till recently were almost without bigger success. The next came the newest attempt to purchase electrical trucks for transportation of garbage, as well as for washing and cleaning of

streets. In total 1060 electrical trucks<sup>4</sup> (we speak about 8 different models) classified according to capacity in 3 groups of 2,8 and 16 tons capacity were purchased.

From recently to Swedish ecological cities joined also Linköping in Denmark, town where buses use bio-fuel made of waste and which are almost inaudible. Also, in Norway there are more and more cars which do not use fuels that pollute atmosphere and on their streets there are more and more electrical cars<sup>5</sup> which pick up speed of around 80 kilometers per hour.

Today we speak about hybrid cars as our future. These are "cars which use two or more energy sources for starting and work" and the most frequent example is the combination of gasoline aggregate and electric engine, like at Toyota's model "prius". Many developed countries have seen in hybrid cars the opportunity to influence on the conscience of citizens on the level of pollution that is high all over the world. The competition in tax reduction given to hybrid owners began, and these cars originated rather accessible. In Holland, for example, the subvention amounts to 7000. euros, and similar policy is applied in some other countries of the European Union, as well as in USA. In London, after year 2000 when the first elected mayor introduced a payment for entrance by car in the city, cars are slowly removed from London and balance between pedestrians, bicyclists and public transportation has been changed. It is also worked on the so called "green system" what represents the large green areas network in this metropolis.

In the meantime, "Seat" has also discovered its first electrical vehicle<sup>6</sup> which will be constructed, developed and produced in Spain. This vehicle with radius of 135 kilometers and highest speed of also 135 km per hour, lays a foundation for electrical mobility in Spain. According to the research conducted in the Institute "Cetelem automobiles" the public found out about the fact that the absolute majority, of even 71% Europeans were interested in the electric car, and that more than half of them intends to buy it. This

<sup>4</sup> The majority can run only around 100 kilometers with one charge of batteries.

<sup>5</sup> The longest ride without new charge of this car is lasting for 4 hours.

<sup>6</sup> Prototype "Altea N electric ecomotiv" is completely on electrical propulsion and what is very important, with zero rate of harmful exhaust gases emission. This model of vehicle will be ceded during the next few months to the Governmental institutions in Catalonia and in Madrid for the needs of their motor pools. It is interesting that when this type of vehicle is parked in the sun, the special devices on the roof of the vehicle supply the refreshment of passenger space with clean air, what reduces the energy need later on the occasion of turning on climate installation.

<sup>1</sup> In EU during year 2011 in total 13.111.209 new cars were sold what is 1,7% less comparing to year 2010. The greatest fall was noted in Portugal, as well as in Greece.

<sup>2</sup> Today CERN consists of 21 countries, and if we count new – Israel and Serbia, in total 23 countries. In the meantime the Council decided that non-European countries may also apply.

<sup>3</sup> The contract comes into effect as soon as the National Parliament adopts it.

research was carried out in 10 European countries and even 84% of inhabitants of Europe consider it to be the best possible future solution for environmental protection. At the moment of intensified competition on the market of environmentally adjusted vehicles, at domestic market in Serbia the sale of vehicles falls.

### 3. Serbian case

Although the environment has been "destroyed on the way" in many wars, numerous technical accomplishments had been applied for the first time in the war. Men's needs in the space are great and require the change of our attitude to the environment. The importance of education on the protection of the environment we live in have recognized already Aztecs, who had very trustworthy educational system many centuries ago.

The time has come for a green development. Competent bodies state that financing of environmental protection has significantly increased from year 2006 till today. In Serbia the development should be moving toward the sustainable development and the protection of environment we live in, as well as energy efficiency with utilization of renewable sources. The center for connecting of bodies competent for control of pollution, the most frequent in the industrial complex in Bor (because the biggest excessive pollutions in Serbia were noted in the city of Bor, Niš, Novi Sad, as well as Užice) will be established in Serbia. The public was concerned by the consequence of fossil fuels combustion in the thermo plants in Obrenovac, Veliki Crljeni and Kostolac and mentioned pollutions of industrial complex in Bor, as well as in Pančevo and Smederevo.

Environmental Management Center (EMC) in Serbia is established by the Regional Environmental Center for Central and Eastern Europe, and Norwegian company Emisoft was publically chosen for environmental protection management software setting. Many Norwegian companies which are among the leading European energy companies, also see their chance for investing in our country, and it is known that our relations with Norway are traditionally very strong for years. The focus should be on the economy, creating jobs and growth.

This year in our country the "European week of mobility", project conducted in the framework of UNDP (United Nations Development Programme) – Serbia, Secretariat for traffic with support of Agency for building land and construction of Belgrade, as well as the Ministry for environment, mining and spatial planning was also celebrated. It is known the alternative mobility represents utilization of public transportation, railway and environmental forms of traffic, bicycle, riding, walking.

On our market so far can be found few models of hybrid automobiles of different producers. In our country the certain initiative to change the law and help the potential buyers of hybrid cars exists. There is also proposal that owners of these cars pay symbolic price for registration, with other reductions, like free parking, lower toll price and alike.

Simultaneously the Agency for environmental protection has established in Serbia the state system for automatic monitoring of the quality of air<sup>7</sup> we inhale.

### 4. Conclusion

It is interesting that today at the time of advanced technology car producers also largely think about possibility to equip cars with constant connection to the global computer network. When shall we drive the car equipped with the link to Internet?

The whole of Europe is talking about the euro-zone crisis, the social crisis. However, for our country they say that it is at the crossroads between the process of modernization and strong anti-modern tendencies. Modern society is characterized by the process of rationalization of all spheres of life. We began key reforms, but we must do more.

Present economic crisis caused that economy of Serbia in the year 2012 enters exhausted by first wave of crisis in the world with numerous problems, like unemployment, inflation and low salaries.

We felt the crisis. Reform of the public sector is needed because of the fall of economic activity; also it is necessary to create better conditions for investments, forming of development bank for financing of long-term projects. Anyhow data on the processing industry show the fall with inflation of around 8% that is still incomparable with developed countries and everything depends from situation in the world, as well as from the price of energy that we have imported previous months because of the low water level on our rivers.

Besides an improved investment climate and further steps to deal with problems, in Serbia we see growing awareness in young people of protecting the environment. Handled correctly a large proportion of our waste can be sorted and reused.

Really, membership in CERN no doubt means that we belong to the scientific family of Europe. We think that we are on the right road. Organized support to our capital Belgrade for candidacy of the city for European capital of culture 2020 is necessary.

Regional cooperation is something we should lean on more in the future in order to find solutions for environmental problems easier and fight them together.

### 5. Literature

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<sup>7</sup> The state network for air quality monitoring today is made of 40 automatic stations.