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The Environment- Our Common Goal

Part 1. Environmental Issues in Romania

Environmental Problems:

- Deforestation
- Industrial pollution sources with significant weight : steel industry, shipbuilding and ship repair, electricity and thermal energy production, petrochemical oil extraction, refining and petrochemical processing, plastics industry, food industry, the woodworking industry and pesticides
- Landslides
- Flooding
- Periods of droughts
- Insufficient green spaces in cities to secure a high quality of life
- There are ground areas with contamination due to industrial activities
- Existence of non-compliant landfills on the area of growth
- Some segments of the adduction networks water / sewage systems are very old and require rehabilitation
- Monitoring environmental factors is only done in urban areas, and not the entire area of the growth
- Fragmentation of habitats due to development of infrastructure that cause the animals to enter the habitat of the man (eg the garbage bears)

The greatest environmental concerns perceived by the Romanians are deforestation (70%), followed by waste management (34%) and air pollution (32%).



Deforestation is the main environmental problem our country faces with. As a direct consequence there are floods and landslides that are increasingly damaging.

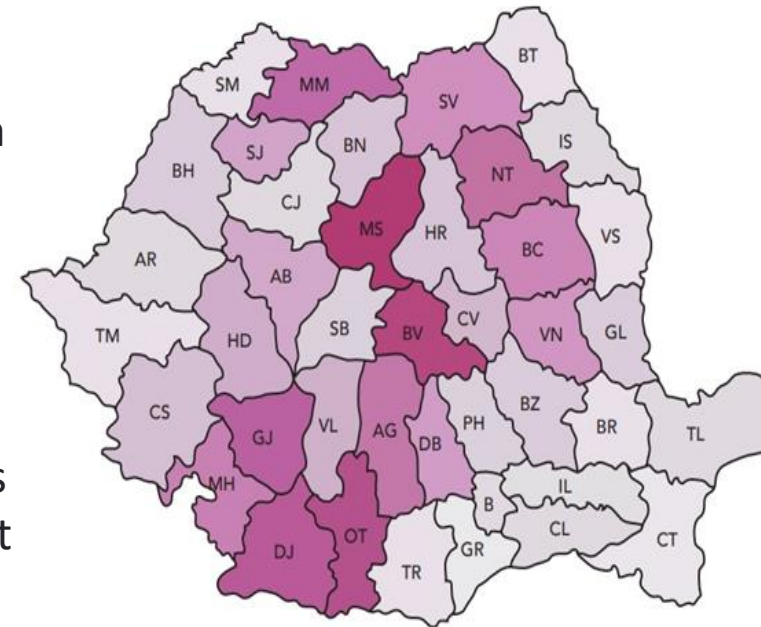
In 2010, forests covered more than a quarter of Romania's surface, namely 26%, but unfortunately, 300,000 hectares of forest have been cut in Romania between 2001 and 2016, The counties in which the deforestation has been at its peak since 2001 are Suceava, Harghita, Maramures and Cluj.



The map of illegal tree cuts in Romania

Moldova's forests disappear and hundreds of illegal cuts are recorded. According to the latest report made by Greenpeace Romania, 111 illegal offenses were committed in Iași County in 2016, four times less than in the previous year. The publication puts this decrease on account of the harsh sanctions and risks to those who practice illegal cuts. "The study follows the official data on the cases of illegal cuts identified and investigated by the authorities. In 916, 9,444 cases of illegal cuts were identified at national level, out of which 5,222 constituted criminal offenses, the average criminal offenses being 26 cases per day. The good news is that, although in 2016 there were 5,222 offenses, this figure represents a 47% decrease in comparison with the previous year. The halving of the number of cases of illegal cuts is the result of new legislative provisions that have increased the number and value of sanctions, greater involvement of civil society in the reporting process, and the increasing role of the police in the process of finding and sanctioning.", the Greenpeace report states.

Harta cazurilor de tăieri ilegale în 2016



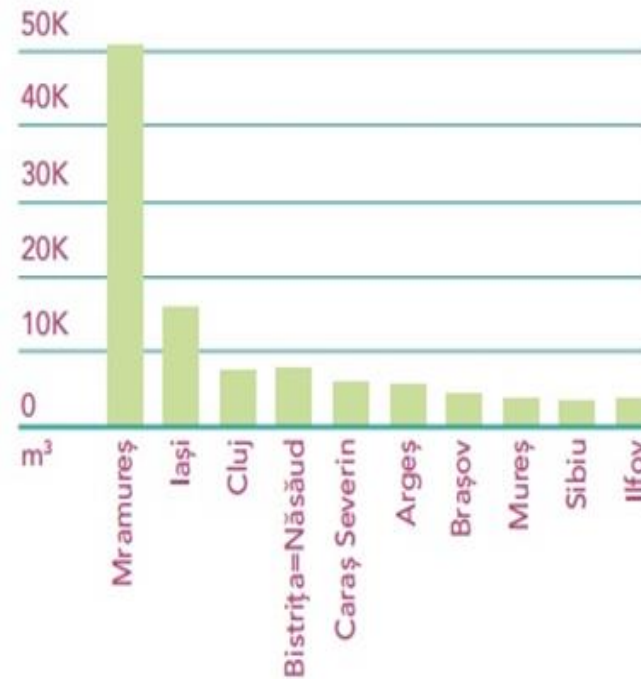
Legendă

Mureș	1057	Bihor	180
Brașov	664	Buzău	172
Olt	605	Galați	160
Dolj	540	Prahova	154
Gorj	417	Sibiu	142
Maramureș	392	Cluj	133
Neamț	356	Călărași	126
Argeș	335	Ialomița	123
Mehedinți	316	Iași	111
Bacău	303	Tulcea	109
Suceava	296	Arad	98
Vrancea	290	Ifov	88
Dâmbovița	261	Vaslui	77
Sălaj	250	Satu Mare	62
Alba	226	Timiș	58
Hunedoara	224	Botoșani	53
Vâlcea	208	Teleorman	42
Covasna	204	Brăila	14
Caraș Severin	202	Constanța	8
Bistrița Năsăud	194	Giurgiu	8
Harghita	185	București	1

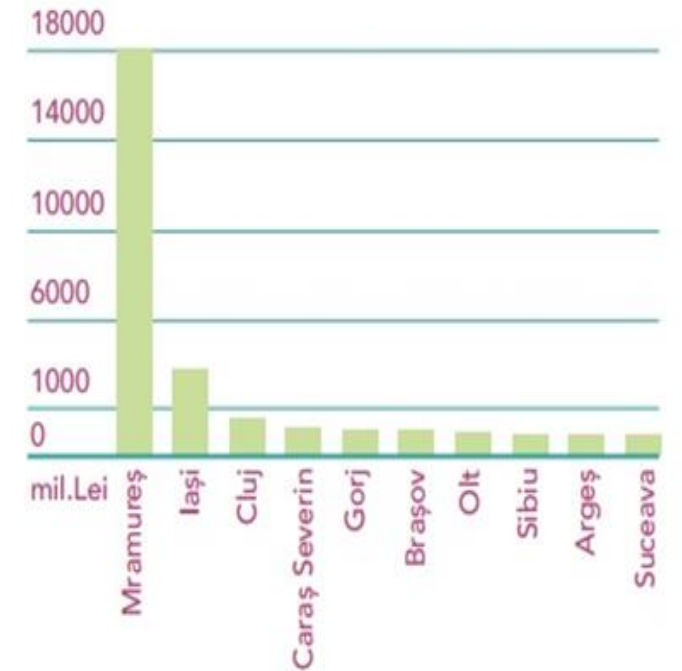
Even though, apparently, the number of tree illegal cuts in Iasi fell almost four times in one year, the amount of illegally cut timber in the county beats all records - 15 thousand cubic meters - and places this county second in the country after Maramures , with 50 thousand cubic meters. "As for the quantity of illegally cut wood in 2016, it amounts to 140,964.85 cubic meters, more than half of it - 52.59% - coming from the counties of Maramures, Iasi and Cluj. "We see an average of 14.82 cubic meters illegally cut per case in 2016 at national level. The counties in which the average per case, was found well above the national average, are Iasi, with 144.60 cubic meters / case and Maramureș, with 129.21 cubic meters / case, "explains Greenpeace Romania specialists.

The first 10 counties that are ordered according to the quantity of timber cut and to the prejudice that this causes

Primele 10 județe, ordonate după cantitatea de lemn tăiată ilegal, în anul 2016



Primele 10 județe, ordonate după valoarea prejudiciului, în anul 2016



Deforestation în Măguri Răcătău, Cluj county



Deforestation in Valea Strajii, Bistrita-Nasaud county



LANDSLIDES- THE DEFORESTATION DIRECT RESULTS

Even though landslides are not a widespread phenomenon, their effects can be devastating in affected areas. Both in 2017 and in 2018, on the territory of Romania there were landslides, affecting both houses, land and gardens, as well as infrastructure elements.

Two examples of landslides: In March 2018 there were some land sliding in several areas of the country that were caused by the heavy rainfall. For example, following the rains, in the middle of the month, eight houses, two of which were in danger of collapse, were affected by the reactivation of a landslide produced in Scorteni in Prahova county, where the land started down the valley on a portion of about 100 meters. Also, a strong landslide was produced in the village of Glodeni in Dambovita County, due to the rain and melting of snow, and this affected eight houses, gardens and roads. In the area of houses the slippage occurred on a surface of 800 linear meters, but the land started down the valley on several hectares.





Locuință afectată - Gornet, jud. Prahova (2014)

Glodeni, Dambovita County

A strong landslide was produced in the village of Glodeni in Dambovita County, due to the rain and melting of snow, in March 2018 and this affected eight houses, gardens and roads. In the area of houses the slippage occurred on a surface of 800 linear meters, but the land started down the valley on several hectares



Landslides in Bistrita- caused by deforestation



In Moldova, in the rural areas of the Curb Sub-Carpathians, the landslide processes are increasing and the floods affect numerous villages in the valleys of the Buzau and the Siret rivers

WASTE DISPOSAL

From all the European countries, Romania recycles only 5% of the total volume of waste it produces, the rest being dumped in the rubbish pit, fact which places a huge strain on the environment.



Tens of kilos of rubbish go to the Apuseni Natural Park every day. The mess is brought to the river's banks that flows at the edge of the park and by the people who live close to the protected area and prefer to throw the garbage, not in the bins, but in the Crisul Baitei. Unfortunately, there are also people who once they go hiking, have a barbecue or go camping, forget to clean the place they use and live the rubbish there.



AIR POLLUTION



85% of the pollution in Cluj is generated by car traffic



"Poison" in the air of Cluj-Napoca

Road, rail and air traffic, combustion systems for heating homes and offices, thermal energy plants and the Pata Rat trash dump poison the city of Cluj-Napoca. According to the Air Quality Plan for Cluj-Napoca (2016-2021), in the air in Cluj-Napoca there are suspended particles (PM10 and PM 2.5), sulfur dioxide, carbon monoxide (CO), benzene (C₆H₆), lead (Pb), arsenic (As), cadmium (Cd) and nickel (Ni). What's even worse is that because of pollution, an average of 800-900 people die annually in Cluj from diseases caused or associated with air pollution.

According to the data provided by the City Hall, on July 13, 2016, the total number of streets in the municipality was 1173, without taking into account the total length of the streets. Of these, 835 streets are in the public domain of the city, with a length of 403 km, of which 384 km are upgraded streets (asphalt) and 19 km are non-modernized streets (simple cobblestones or boulders, crude stone). The document also shows that the city of Cluj-Napoca is crossed by the national road 1 C and the European road E 81, two communication routes with an MZA value (physical vehicles / 24 hours) greater than 16,000 according to the forecast of the Center for Road Traffic Technical Studies and Informatics. According to City Hall data, 146,000 cars are registered at the city level. In 2014, the amount of NO_x emissions was 0.001061 tones / year, and NO_x oxides were 726.647 tones / year.

Another sector that influences the air quality in Cluj-Napoca is the low-stationary sources, which include low-power combustion installations mainly designed for space heating and domestic hot water for residential and non-residential sectors. The danger in the air is also coming from the waste sector. The absence of an authorized waste repository at the county level is a problem for the environment, experts warn. "This sector, at the level of the city and the county of Cluj, is a "widow" sector in the sense that up to date there is no class "b" warehouse in the urban area. And the project "Integrated Waste Management System" in Cluj County, which provides for the realization of the zone deposit, has been practicing for many years. The lack of such a deposit in the county is a major environmental problem, where the only temporary solution found by the local and county public authorities for waste disposal was the setting up of temporary waste storage platforms. From the data provided by the Environmental Protection Agency Cluj, in 2015 were temporarily stored for the disposal of 65804,066 tons of household waste.

As a result of these activities, suspended particles (PM10 and PM 2.5), sulfur dioxide, carbon monoxide (CO), benzene (C₆H₆), lead (Pb), arsenic (As) cadmium (Cd) and nickel (Ni).

Suspended particles are a particle agglomerate of different sources and having different sizes, different compositions and different properties. They are a complex mixture of organic and inorganic substances. In combination with other pollutants in the air, it may lead to human health effects. More specifically, it can affect the lung, cardiovascular apparatus, and can even cause cancer.

Sulfur dioxide (SO₂) is a gas generated by the reaction of sulfur with oxygen ($S + O_2 \cdot SO_2$), being toxic. Sulfur dioxide is today regarded as the most harmful chemical in the air. The most important influence is on plants and less on humans and animals.

Carbon monoxide is a major urban air pollutant, the total emissions of this pollutant exceed the sum of the emissions of all other pollutants. This is an asphyxiating pollutant, a concentration higher than 0.1% in the air begins to be harmful after a longer period, and a 1% concentration is deadly after a few minutes. A lethal carbon monoxide concentration can accumulate in a closed garage when the engine of a car is running for about 10 minutes.

Another poison in the air of Cluj is benzene. It acts on the central nervous system causing the body temperature to fall below normal limits and the paralysis of the vasomotor center. In contact with the skin exerts a caustic action, producing serious, whitish and painful injuries.

Lead, arsenic and cadmium are another category of substances that affect the air of Cluj.

These may affect the blood formation system by altering the synthemo- globin and reducing the survival time of the red blood cells.

Critical areas of air pollution identified by the Environmental Protection Institutes in each county from the southern part of the country:

DOLJ COUNTY :

- Northwestern industrial area of the county generically named "hot spot" monitored with priority by I.P.M. Craiova and own self-monitoring having as activities:

- production of chemical fertilizers on the basis of nitrogen, organic products, inorganic products ;
 - the production of electric and thermal energy based on fossil coal (lower lignite from the carboniferous basin of Jiu Valley) represented by Thermo-electrics of Bucharest - FE Craiova;
 - heavy traffic and rail traffic on DE 70 and CFR Craiova-Timisoara .
- The northern industrial platform of Craiova :
- the production of electric and thermal energy for the city of Craiova based on oil, CLU and coal (lignite) represented by Thermo-electrics of Bucharest - EU Craiova II;
 - car traffic (north-south artery of Craiova) and railway (CFR Depot and CFR Craiova Regional)
 - primary processing of Ghercesti crude oil (SPP Craiova).



The Western industrial platform of Craiova - agro-food products: beer (SC BERE SA), precast concrete elements, tiles and building materials (SE ELPRECO SA), construction sites, road traffic on DE 70 Craiova-Filiasi and railway - the Craiova-Timisoara relationship.

Podari Industrial Platform (agro-food production, sugar, oil, alcoholic beverages, etc.) represented by SC OLPO SA PODARI, SC ZAHARUL PODARI, SC REGINA SA, SC WIMAR SA.

- Calafat industrial platform - agro-food production - sugar, starch and glucose, alcohol, etc. as well as electric and thermal energy based on oil and CLU represented by SC ZAHARUL SA, SC EXTENSIV SA, SC AMIDON GLUCOSA SA, SC BIOSIN SA and CET Calafat respectively.

OLT COUNTY :

- The Eastern Industrial Platform of Slatina - SC ALRO SA (fluorine in the form of hydrofluoric acid, fluorine salts, coke powders, carbon dioxide, carbon monoxide and hydrocarbons, nitrogen oxides, volatile organic compounds), SC ELECTROCARBON SA (petroleum coke powders, pitch powders, anthracite powders, tars, carbon monoxide and sulfur dioxide), SC ALPROM SA (chlorine, fluorine, dust, nitrogen oxides, sulfur dioxide, carbon monoxide)

- The industrial platform of Caracal - SC OLTTYRE SA (carbon monoxide, sulfur oxides, carbon black, suspended particulates)

- Bals industrial platform - powders, carbon monoxide, carbon dioxide, sulfur dioxide, nitrogen oxides

- The industrial platform of Corabia - S.C. MAY GROUP S.A. (sulfur dioxide, carbon monoxide, nitrogen dioxide, particulate matter, hydrogen sulphide, volatile organic compounds), S.C. ZAHAR S.A

GORJ COUNTY :

- Rovinari -pollutants from SE Rovinari (frequency of exceedances at the sedimentable dust indicator - 67.82%);
- Turceni - pollutants from SE Turceni (exceeding the sedimentable dust indicator - 13.68%);
- Areas near the mining quarries, namely: Timiseni, Rosiuta, Matasari, Pinoasa, Jilt, Seciuri.

MEHEDINȚI COUNTY :

The area of the county has not recorded areas with permanent critical situations in the atmospheric pollution.

Typical sources of pollution are ROMAG PROD, through H₂S and ROMAG THERMO emissions, which, through the quantities of CO₂, SO₂, NO_x, suspended particulate matter released into the atmosphere, have an essential contribution to the overall toxicities in the county.

VÂLCEA COUNTY :

- The chemical platform Rm. Vâlcea (Oltchim, USG, CET, Vilmar)
- Asbestos and slag storage of CET Govora
- Urban and high-traffic national roads
- Industrial zones of S.C. Elvila Carpatina Branch in Rm. Valcea
- Exploitation of surface coal from Berbesti - Alunu
- Limestone exploitation from Bistrita



WHAT WE CAN DO TO FIGHT AGAINST AIR POLLUTION

To improve the air quality , experts propose several measures. These include the construction of a metropolitan belt for each city, the renewal of the car park, the thermal insulation of the dwellings and institutions, the stimulation of the inhabitants to remain in the centralized district heating system, new quaternary power plants for the areas where the district heating network is not extended, attracting new subscribers to the centralized district heating system by differentiated application of the tax base according to the heating methods of the dwelling, the intensification of the RAR controls for the identification of the cars whose catalytic converters and whose filters do not meet the current rules, the checking of the aircraft maintenance by the operator, the encouragement of the population to use public transport in cities and municipalities, encouraging local public transport operators to use buses, minibuses, coaches, etc. with new generation hybrids, electric motors, through the auction bills and the maintenance and realization of bicycle tracks.

Mining

Mining leads to deforestation and releases of toxic minerals and heavy metals into soil and water. The effects of mining persist for years after the ore is exploited.

We should oppose mining and exploitation of underground resources through polluting practices that affect the environment, ecosystems and local communities. There should be infrastructure development for the exploitation of renewable energy.



Long periods with too much heat and without rain – droughts

In Romania, the effects of climate change have had a major impact on agriculture. In the last decade, periods of drought and floods have become more frequent, with negative effects on agricultural productivity, especially wheat and maize, species with the most significant share in the crop culture structure.



Expansion and intensity of extreme weather phenomena reduce agricultural output. It is worrying that in Romania, about 14.7 million hectares of agricultural land, out of which 9.4 million hectares of arable land (64% of the arable land) are affected to a greater or lesser extent by frequent droughts over long periods and in consecutive years. The unusual heat wave for some periods costs us enormously. In Romania, there was a drought in 2018 as it had not been in the last 50 years in early May. In the south of the country and beyond, the earth cracked like in the middle of the summer, and the effects on wheat and grain were huge. Moreover, corn, sunflower and peas, barely sown, could not grow without water, in the absence of irrigation systems. In terms of desertification, the area of SV of the Olt county - Ianca - Potelu - Stefan the Great can be considered the critical area in terms of soil deterioration.

In 2002, the perimeter of ecological reconstruction was set up in the Danube Meadow in the area of 1048 ha, in the range of localities: Orlea - 258 ha, Ianca - 621 ha, Grojdibodu - 169 ha.

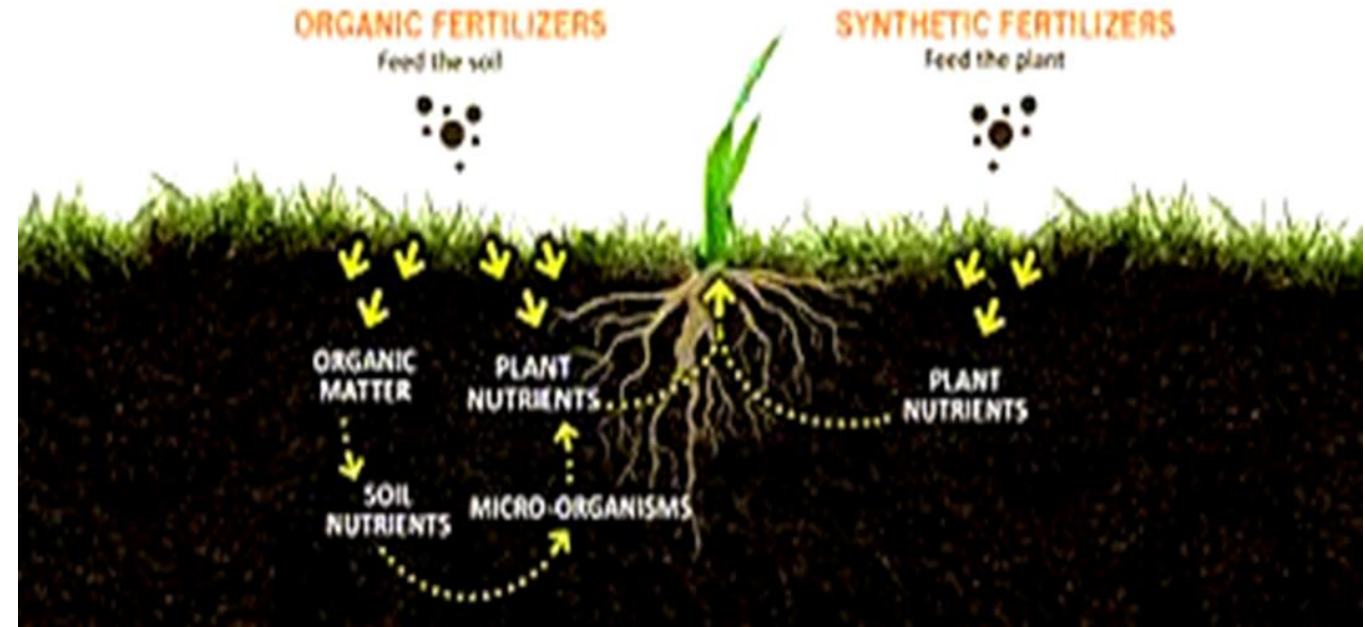


Pesticide Pollution

The need for permanent growth of agricultural production requires the proper protection of cultivated plants and forest vegetation against pests, diseases and weeds.

From a certain insecticide or fungicide only a small part (about 6-8%) act on the pests, the rest (92-94%) is lost, reaching the soil, the plants and other organisms of the agroecosystem, thus, hurting both the production and the fertile soil, since pesticides are absorbed by plants more easily from sandy soils. Plants grown on soils with high pesticide retention capacity are more heavily contaminated than those cultivated on soils with low retention capacity.

Hopefully, non-toxic products have started to be used more often in all regions.



ENVIRONMENTAL PROBLEMS AFFECT FAUNA

Humans are obviously affected by pollution, as seen by disease like asthma or cancer---but animals are victim to its effects too. Many species have experienced pollution events that have caused death or a threat to their habitat. Factors like undrinkable water, destruction of habitats or hunting come into play when talking about fauna pollution in Romania.



The Danube Delta

The region is confronted with a number of environmental issues, both due to natural and man-made factors: forest degradation, marine pollution, beach erosion, pollution caused by industrial substances or pesticides and chemical fertilizers.

One of the environmental problems faced by the Danube Delta is the pollution of the river water. Also, the clogging of the Delta's side branches may in time lead to the flooding of a large part of the Delta's land surface and the destruction of this ecosystem.

The Black Sea coast is affected by coastal erosion (beaches Mamaia, Tomis Nord, Eforie, Costinesti, Olimp - Venus, Saturn) and beach pollution.



FLOODING



On 29.06.2018, torrential rains have created problems in twenty counties Bacău, Brăila, Botoșani, Buzău, Constanța, Călărași, Covasna, Dolj, Galați, Galați, Iași, Ilfov, Neamț, Prahova, Sibiu, Suceava, Tulcea, Teleorman, Vrancea și Vaslui and in Bucharest, water flooding hundreds of courtyards, houses, annexes and basements. Dozens of trees were knocked down by the wind, and the fire brigades intervened to release them.



In Dambovită county, on 09.08.2018, 8 localities were affected by the rainfall and bridges and roads were destroyed

Many homesteads were flooded in Baragan



No more of these aspects!



We want only this! The environment is in our hands!
We care!



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