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FACTSHEET

Effects of the energy crisis during the 2022/2023 heating season

on-line survey in Bulgaria, Hungary and Romania
with more than 1500 municipalities participating

Highlights:

The energy crisis increased the use of firewood

Regarding the share of firewood heating among the population, in Romania most of the survey answers reflect that the population has always heated with wood. In Hungary and Bulgaria, most municipalities reported a small or average increase. However, in Hungary, 18% claimed a significant increase, which is the highest in the region.

The increased demand resulted in supply shortages

The increase in the use of firewood in Hungarian settlements caused the most supply problems in the region. A significant number of households have stayed long on the waiting lists in Bulgaria and especially in Hungary, where the share of illegal logging and collecting scrap wood has increased noticeably according to 30% of respondents.

In some area, air pollution is serious during the heating season

On average, air quality is detected to be the least problematic in Romania, while in Bulgaria and in Hungary, most municipalities indicated it a problem from 3 to 6 on a scale of 10, where 1 means 'not noticed at all', and 10 means 'a serious problem every year'. The share of the most affected municipalities - with a rank of higher than or equal to 7, is the highest in Hungary (24%), while in Bulgaria and Romania it is

Energy poverty rate

The responses proved that energy poverty is a noticeable problem in almost all responding settlements. While in Bulgaria and Hungary, respectively, 49% and 35% of the municipalities marked the energy poverty rate higher than 50%, in Romania it is only 19%.

**Learn more about the LIFE BIO-BALANCE project which provides solutions
how these negative trends can be reversed:**

<https://wwfcee.org/what-we-do/climate-energy/life-bio-balance-project>

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Effects of the energy crisis in Bulgaria, Hungary and Romania

Online survey conducted for WWF Hungary and its partner organizations
February - May, 2023

An on-line quantitative survey was carried out in Bulgaria, Hungary and Romania among the mayors of settlements. The objective of the survey was to study and identify the effects of the energy crisis during the 2022/2023 heating season in the three countries. The target group included 589 respondents from Hungary, 880 from Romania and 41 from Bulgaria, which translated to an approximately 15% response rate in Bulgaria, and a 20% rate in Hungary and Romania among the targeted settlements. It is important to note that in Hungary, the survey was sent only to the most vulnerable municipalities, those with less than 5000 inhabitants, while in Bulgaria and Romania there was no such restriction. This may have affected the overall result of the survey.

The survey was carried out between February to May of 2023.

This survey is outstanding due to the fact that only very limited official statistical data are available on the topics covered by the questions. This questionnaire provides detailed information not only about the energy efficiency measures of the municipalities as reactions to the energy crisis, the heating habits which might have changed and thereby the rising air pollution, but also provides us insight into energy poverty and energy awareness. The three main topics of the survey were: municipal energy management and public institutions; energy poverty, and air pollution.

Municipal energy management

Regionwide, most municipalities do not track the energy consumption of public institutions. However, the collection of data is useful because it is the first step towards conscious energy use, which in itself has been proven to help reduce consumption. The majority of the respondent municipalities have faced difficulties regarding the payment of utility bills and have also taken special measures in response to the energy crisis.

In Bulgaria and Romania, two thirds of the respondents plan to implement building insulation, an upgrade of heating devices or installation of renewable energy production capacity from their own resources. In Hungary, municipalities almost cannot afford any kind of investment at their own expense. With funding, there is a significant will to implement building energy renovations, and also to change fuel systems to electricity.
12%.

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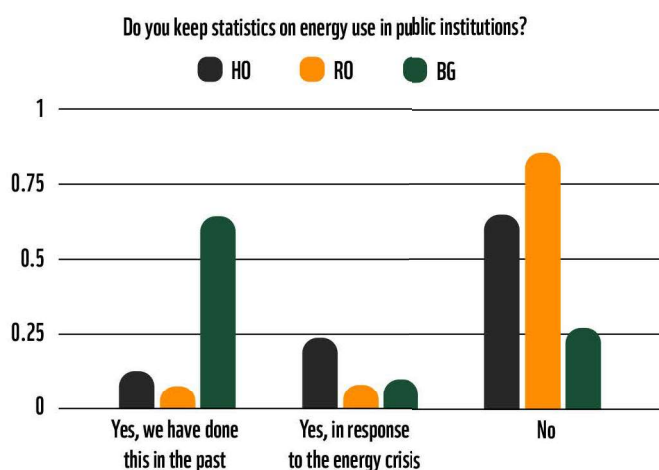
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Municipal energy management

Online survey conducted for WWF Hungary and its partner organizations
February - May, 2023

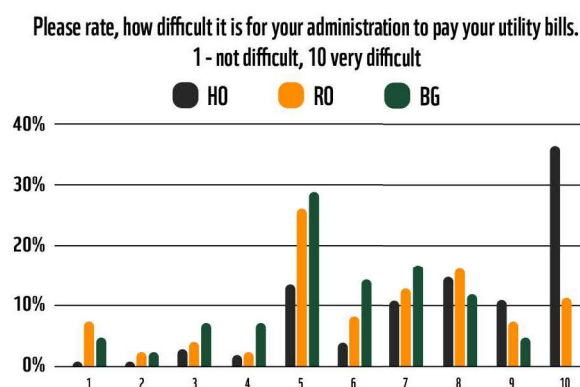
Energy statistics in public institutions

The most municipalities who keep energy consumption data records are in Bulgaria. In Hungary and Romania, most of them do not take these measures, not even in response to the energy crisis.



Difficulties with paying utilities

The majority of municipalities marked their problems with paying utilities as 5 or more on a scale of 10, where 1 is not difficult and 10 is very difficult. The problems seem to indicate the highest difficulties in Hungary, while the lowest are in Bulgaria.



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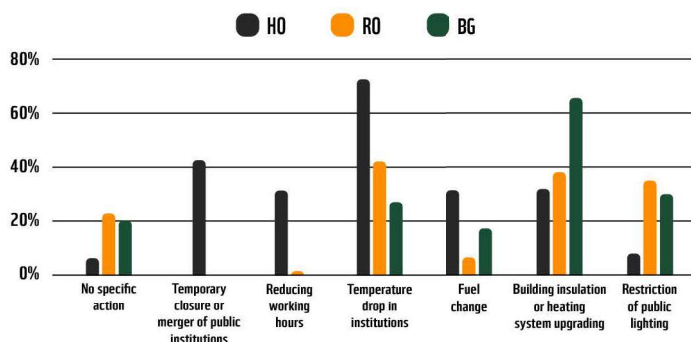
Municipal energy management

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Measures taken in response to the crisis

In Hungary and Romania, reducing the temperature in institutions turned out to be the most popular measure, while in Bulgaria, most municipalities carried out building insulation or heating system upgrades. Respondents were able to mark more than one answer.

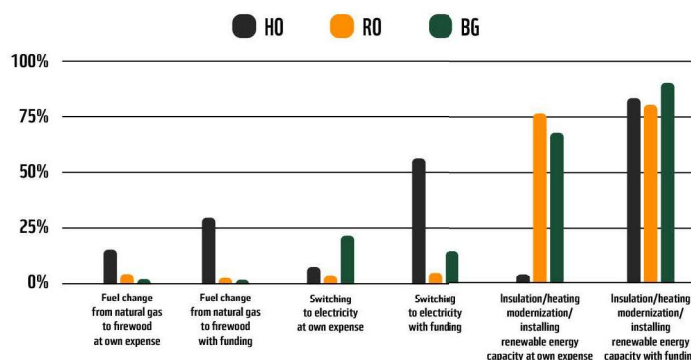
What measures have you taken to respond to the energy crisis?
You can select several options.



Planned building energy measures

Building energy measures are in the plans in all three countries, mainly involving funds. Energy efficiency measures (Insulation/heating modernization/Installing renewable energy capacity) are the most popular regionwide. The Hungarian situation is outstanding due to the fact that, according to the responses, Hungary is the only country where a fuel change from natural gas to biomass is significantly considered (15% at own expense and 30% involving funding), and it is also clear that energy efficiency actions are nearly impossible to be implemented without financial help compared to the other two countries.

In response to the energy crisis,
do you plan to take any of the following measures with or without funding?



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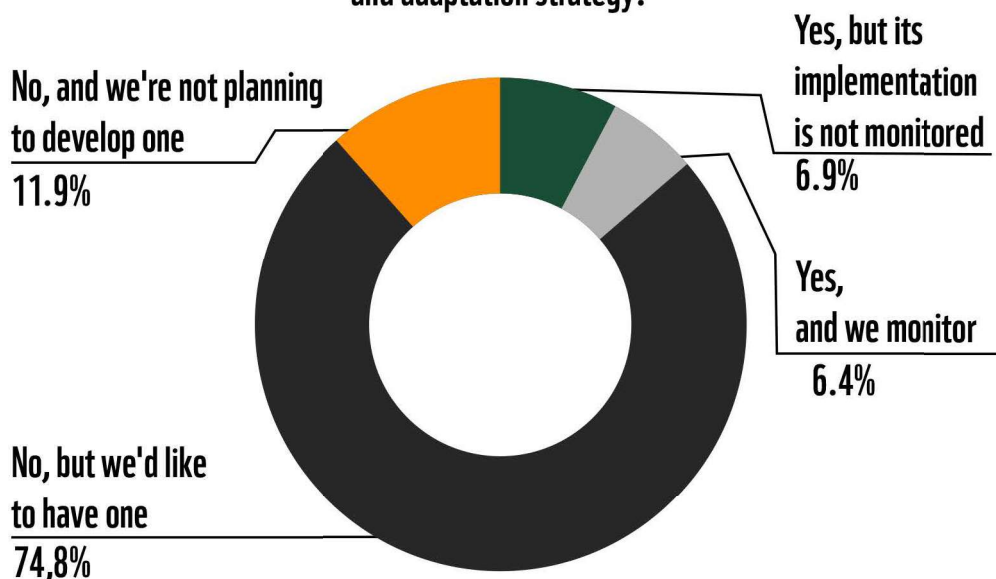
Municipal energy management

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February - May, 2023

Owning a local climate strategy

Regionwide, almost two third of the respondent municipalities do not have a local climate change mitigation and adaptation strategy, but would like to have one in the future. Among those who have it, the monitoring of the measures is the most common in Bulgaria, while least common in Hungary.

Does the community have a local climate change mitigation and adaptation strategy?



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Energy poverty

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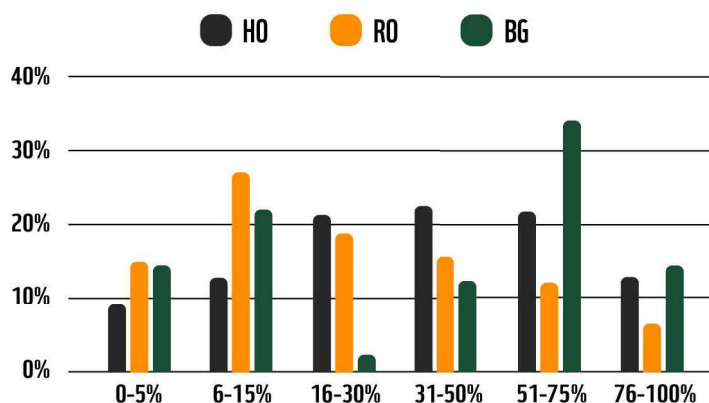
Energy poverty

The responses proved that energy poverty is a noticeable problem in almost all responding settlements. Based on the survey results, the key to solving the challenges caused by energy poverty can be found in deep and long-term measures instead of short-term financial support. At the same time, the opportunities of municipalities are very limited in the current economic situation. On average, only a quarter of the respondents attempted to provide support to households struggling with energy poverty regionwide. Comparing the results regarding the existence of programmes or schemes tackling energy poverty on a local level, in all three countries one municipality in four answered positively.

Energy poverty rate

While in Bulgaria and Hungary, respectively, 49% and 35% of the municipalities marked the energy poverty rate higher than 50%, in Romania it is only 19%.

Please estimate, what percentage of the local community is affected by fuel poverty.



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Changes in solid fuels and air pollution

Online survey conducted for WWF Hungary and its partner organizations
February - May, 2023

Changes in solid fuels and air pollution

The questionnaire also addressed whether the energy crisis had a significant impact on the use of solid fuels. Regionwide, the highest growth was experienced in Hungary, where 70% of the respondents reported a noticeable increase in the use of firewood. There is also a correlation between the increase of wood burning and the rate of energy poverty: in most of the settlements where the rate of wood burning has increased significantly, the rate of energy poor households is over 50%. In Bulgaria and Romania, the energy crisis has brought a 39% and 21%, respectively, increase in firewood heating. However, in these two countries many respondents claimed that the homes of the local population have always been heated with wood (in Bulgaria 39%, while in Romania 57%). Regionwide, on average, exactly half of the responding municipalities try to encourage the population to use modern, low environmental impact heating methods.

In this context, the increased use of firewood caused the most supply problems in the Hungarian settlements in the region. In Romania, no supply problems have occurred. In Bulgaria and in Hungary, a significant number of households have long stayed on the waiting lists, and especially in Hungary, where the share of illegal logging and collecting scrap wood has increased noticeably according to 30% of respondents. On average, air quality tests have been determined to be the least problematic in Romania, while in Hungary and Bulgaria, according to most municipalities, the tests show a significant problem: 4 to 6 on a scale of 10. Most of the settlements where air pollution is higher than average would require an air pollution meter.

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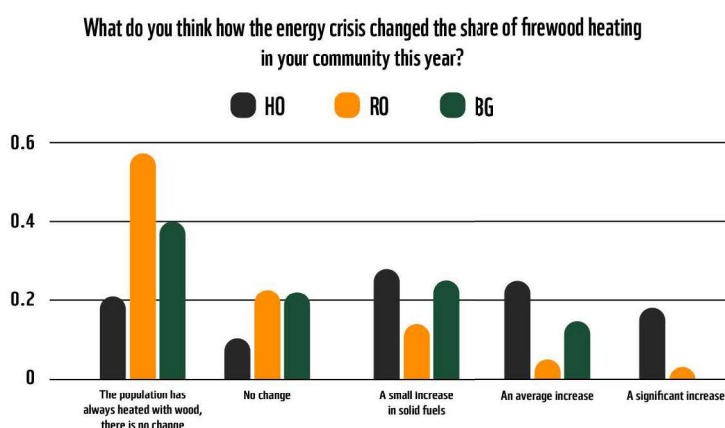
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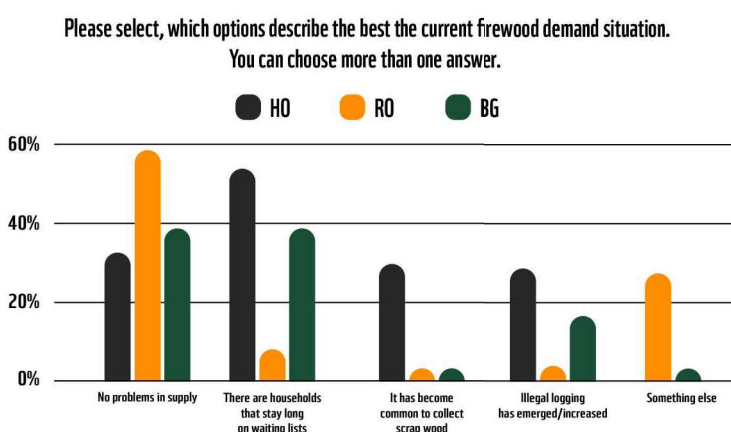
Changes in wood heating

Regarding the share of firewood heating among the population, in Romania most of the survey answers reflect that the population has always heated with wood. In Hungary and Bulgaria, most municipalities reported a small or average increase. However, in Hungary, 18% claimed a significant increase, which is the highest in the region.



Demand for firewood

The increase in the use of firewood in Hungarian settlements caused the most supply problems in the region. A significant number of households have long stayed on the waiting lists in Bulgaria and in Hungary.



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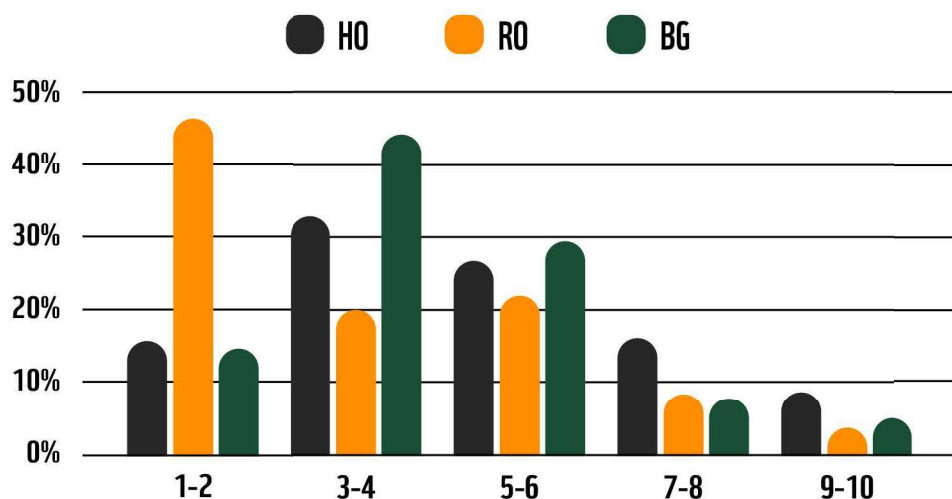
Changes in solid fuels and air pollution

Online survey conducted for WWF Hungary and its partner organizations
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Air pollution from residential heating devices

On average, air quality is detected to be the least problematic in Romania, while in Bulgaria and in Hungary, most municipalities indicate it a problem from 3 to 6 on a scale of 10, where 1 means 'not noticed at all', and 10 means 'a serious problem every year'. The share of the most affected municipalities - with a rank of higher than or equal to 7, is the highest in Hungary (24%), while in Bulgaria and Romania it is 12%.

Please indicate, to what extent you consider air pollution from individual
firewood heating to be a serious problem?
1- not noticed at all, 10 - serious problem every year.



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