

Linkages between internal displacement and climate: Evidence from Serbia

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Abstract: The paper analyses the relationship between internal displacement and climate in the Republic of Serbia in the last fifteen years. The results show that weather related hazards have an impact on internal displacement, influencing very specific characteristics of population mobility. It was found that floods have by far the greatest impact on the intensity of population mobility. As it is influenced by the climate conditions, this type of population mobility stands out from other types of migration in Serbia. Namely, internal displacements influenced by weather related hazards are primarily temporary and depends solely on the characteristics of the climate, and requires urgent and specific governmental support. For this reason, studies connecting internal displacement and climate require a different approach.

Keywords: internal displacement, climate, Serbia

Introduction

Climate change is one of the greatest challenges of our time. The effects of climate change are numerous and include

severe environmental degradation and extreme weather events (heavy rainfall, droughts, heatwaves, etc.) that can affect people in different ways. It is recognized that climate change is increasingly leading to the displacement of people. Given the complexity of the relationship between climate and mobility, it is important to emphasize that climatic or natural hazards do not automatically lead to displacement (Piguet et al., 2011; EMN, 2023). However, official data show that millions of people around the world have been displaced by climate change. Some researchers point out that environmental changes, including climate change and environmental degradation, have become the “new normal” (Rojas Paz, 2022; IDCM, 2024).

Although climate change is a reality in both developed and developing countries, it is expected that the population in developing countries will be more affected by these changes and will be forced to migrate to a greater extent. Indeed, in less risky or more stable environments, the exposure of an individual or household to climate change may be greater and displacement from these areas is more frequent (Reuveny, 2007; IOM, 2009). Population mobility triggered by weather related hazards can pose numerous challenges for communities, and adaptation to these challenges will primarily take place at the municipal level (Nourali et al., 2024).

Understanding the link between climate and population mobility requires both social and natural science perspectives (Andrews, 2020). This paper analyses the intensity of internal displacement in the Republic of Serbia in relation to weather-related hazards over the last 16 years (2008-2023). The aim is to recognize and highlight the weather-related hazards that have the greatest impact on the internal displacement in Serbia in this context, and to determine the characteristics of the process.

Methods and data

This paper analyses statistical data on internal displacements by weather related hazards in the Republic of Serbia acquired from the Internal Displacement Monitoring Centre IDMC (<https://www.internal-displacement.org/>). Data were processed in the SPSS software package. In order to better understand the internal displacement caused by weather related hazards, a detailed review of the literature on this topic was carried out. A particular focus is on the displacement conditions of persons who had to leave their homes due to the floods that occurred in Serbia in 2014.

Results and discussion

In the period 2009-2023, the total number of Internal Displacement in Serbia is 38,371. The data indicate that the floods have affected the largest number of Internal Displacements (38,029) (Figure 1).

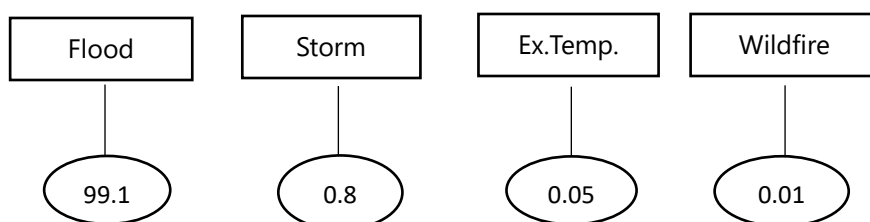


Figure 1. Internal displacement by weather related hazards in Serbia (%), 2009-2023.

Source: Own work based on data from IDCM, 2024.

Internal displacement due to floods accounts for 99.1% of all internal displacement caused by weather related hazards. In addition to floods, the population was also displaced by other hazards during this period, but to a much lesser extent. Storms

caused 320 internal displacements (0.8%), extreme temperatures 20 (0.05%) and forest fires 2 (0.01%) (Figure 1).

Although internal displacement due to floods was characteristic for a larger number of years in the observed period (2010, 2014, 2016-2023), it is clear that the floods in 2014 caused the highest intensity of internal displacement (33,360/86.9%). Compared to the other years, the floods in 2010 also caused a slightly higher number of internal displacements (3,000/7.8%). Internal displacement due to storms was recorded in 2023 and forest fires and extreme temperatures (cold wave) in 2013 (Table 1).

Table 1. Internal displacement by weather related hazards in Serbia by years, 2009-2023.

Year	Weather related hazard type	Internal Displacements	
		n	%
2009	/	/	/
2010	Flood	3000	7.8
2011	/	/	/
2012	/	/	/
2013	Wildfire	2	0.01
2013	Flood	172	0.4
2013	Extreme Temperature	20	0.05
2014	Flood	33360	86.9
2015	/	/	/
2016	Flood	39	0.1
2017	Flood	42	0.1
2018	Flood	125	0.3
2019	Flood	292	0.8
2020	Flood	880	2.3
2021	Flood	34	0.1
2022	Flood	1	<0.01
2023	Flood	84	0.3
2023	Storm	320	0.8

Source: Own work based on data from IDCM, 2024.

The heavy rains that hit Serbia in May 2014 led to floods that affected around 1.6 million people in 38 municipalities and cities, mainly in central and western Serbia. The heavy rainfall caused landslides, that led to the collapse of houses, roads, bridges and other parts of the infrastructure. Most of the displaced people were accommodated with their relatives, while some of them were temporarily accommodated in camps set up by the government and the Serbian Red Cross (UN, EU and WBG, 2014). One of the surveys conducted during this period found that the biggest problem for most IDPs was leaving their homes and property, followed by how to get on a boat and how to get through the water. The biggest problem for people staying in collective shelters was the uncertainty about their return - when and if they will return, but also what the situation is like in their places and homes (Baćanović, 2014).

Conclusions

As in most parts of the world, climate is also having an impact on population displacement in Serbia. This type of population mobility is not continuous, but only temporary and occasional on the territory of Serbia. Since the population is forced to leave the country, weather related displacement can be considered a form of forced migration. Floods are categorized as weather related hazards that are primarily related to internal displacement. It is therefore important that future research on this topic is conducted in flood-prone areas.

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