

MEASURES FOR PRESERVATION OF ADMINISTRATIVE TERRITORY OF FUSHE KOSOVA MUNICIPALITY

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SUMMARY

In the historical perspective, human beings have chosen set up their settlements near river valleys, reckless of the risk that rivers may bring forth. As a consequence of this, they had to cope many times with severe floods, which even caused casualties in many cases. It's almost impossible to find a place upon earth that people are not concerned about the eminent risk of being flooded. Floods are natural phenomena that mainly take place in all types of rivers and that cannot be prevented but the authorities responsible for this sector are obliged at least to well-manage them. Floods are commonly defined as a phenomena that water covers the soil that is not usually covered with water. This paper reveals and scrutinizes the attained outcomes relating the measures that have been carried out for prevention of floods in the administrative territory of Fushe Kosovo from 2014 to September 2016. Fushe Kosovo Municipality is located in the central part of Kosovo Republic and is comprised from a surface of 84,3 km². As far as the morphological aspect is concerned, it is characterized from a mountainous relief. Approximately 47% of the surface it is located in a oversee height varying from 500 - 800 m. The continental climate. The average annual rainfalls are 628 mm, while the annual temperature is 9.8 °C. The hydrographic network is developed. The main rivers are that of Sitnica and Drenice. The rivers meet high levels of water during May, April, November, and December. Meanwhile the lowest levels of water are registered in August, September, January and February and January. The floods take place every year and their longevity is from 3 - 5 days. But there are some specific regions where the duration is up to ten days. The most endangered regions are that of (Henc - Miradi, Vragoli - Kuzmin - Lismir (Sitnica River). Graboc i Poshtem - Bardh i Madh - Pomazotin - Bardh i Vogel - Kuzmin (Drenica River).

Key words: Floods, measures, area, locality, Fushe Kosovo.

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INTRODUCTION

Floods are an environmental phenomena that cannot be prevented (Directive 2000/60/EC), and may be evident in all types of rivers. It can be barely found a place upon earth that are not concerned about this destructive phenomena. They are mainly caused by intensive rainfalls for long period of time but there are even other underlying factors apart from excessive rainfalls that foster the occurrence of floods, such as the morphology of the terrain, topography. Usually the floods take place after some hours or even days, but there are cases that they occur quite rapidly a thing that does not permit the inhabitants of the respective region to take the necessary measures of evacuation. The vast majority of soil in Kosovo republic is affected by floods. Undoubtedly, due to this are caused innumerable economic problems which tend to be worrisome, both in public and private sector. The most affected region is that of Fushe-Kosovo. The central part of Kosovo has a flat terrain, while the suburbs is surrounded by a relatively mountainous terrain. The vast majority of the territory is comprised of mountainous relief 47%, 500 meters oversea. This hypsometric change of the terrain during the periods of intensive rainfalls and when the snow melts can cause rapid floods in some particular regions such as Henc-Miradi e Poshtme-Vragoli, Kuzmin-Lismir (Sitnica river), Graboc i Poshtem-Bardh i Madh-Pomazotin, Bardh i Vogel-Kuzmin (Drenica river).

LEGAL FRAMEWORK

The administrative territory administered from the municipality of Fushe Kosovo, is based on Law Nr. 03/L 041 (GZRK year III/Nr.26/02, October 2008), while the implementation of competences is in accordance to Law Nr. 03/L-40 GZRK Year III/Nr28/04 October 2008). On the basis of article 17, Law Nr.03/L-40, Municipality of Fushe Kosovo, is responsible for exercising a wide range of public services. Beside this, it also is also entitled to exercise competences and responsibilities which are delegated to other Laws. A good example to illustrate this, may be considered the delegation of competences to Law Nr.04/L-147 (GRKZ Nr. 29/10/2013). This law has delegated a big number of competences and responsibilities for the municipalities for the articles 40, 46, 51, 55, 57, 68, and 72. In accordance to Law 46, the Municipality of Fushe-Kosovo, is delegated the competence to preserve the water from intoxication. Based on the paragraph 1 Article 47 Law Nr. 04/L-147. The municipality has raised the finance and has a certain budget to meet the needs in cases of misfortunes. The source of the budget

are commonly the grants and donations. Consequently, as matter of fact the municipality and has increased the scope of services in the private and public sector properties. The municipality has also encouraged and fostered activities which are closely related to cleaning, maintenance of some segments of Sitnica, Drenica, Graçanka rivers.

HISTORICAL DATA

The territory of Fushe-Kosovo, has been frequently entangled from environmental phenomena such as floods etc. The historical data, witness that during 1979, Sitnica river has been subject to severe floods. The destructive consequences which have derived from these floods have severely damaged the agriculture and infrastructure of the land. The floods that took place in 2006 (Fig.1, 2, 3, 4), have caused the flood of 1159 inhabitants. (The Directory of Emergency of Fushe Kosovo, 2006). As consequence of floods many villages remained without drinking water, and to make the matter worse there have been also evidenced cases of gastrointestinal diseases and local-based diseases (QKFM, 2006). In 2014-2015, the floods have devastated many lands, settlements, lands, and contaminated the wells of drinking water. (AKMM, 2015). According to this estimations the damages caused by the floods in Fushe Kosovo are estimated to be about 300,000 euros. This sum was required to rehabilitate the and repair the destructed areas.



Figure 1: Floods in Drenica river, 2006



Figure 2: Floods in Sitnica river, 2014



Figure 3: Floods in Sitnica river, 2015



Figure 4: Action of evacuation team, 2015

STUDY AREA

Fushe Kosovo Municipality located in the central part of Kosovo, with a surface of 84,7 km². The population in this part is 34,827 with a density of 412.8 inhabitants for km². (ASK, 2011). The hydrographic network is relatively developed with a length of 95 km (Fig. 5). The main rivers that come across the territory of Fushe Kosovo, are Sitnic, Drenica, Graçanka, and Prishtevka. (PBHK, 1983), while the main streams are that Gjelbezaku, Zagona, and Jazi. They divided in streams with temporary and permanent flow. The region of Fushe Kosovo is characterized by a mediterranean climate (Pllana 2015). The hydrographic is in relevance to the fluctuation of relief that drains the water in the north. The water flows, are characterized by a nivalo-pluvial regime with high levels of water in May, April, November, and December. The lowest levels are recorded in August, September, and in the upcoming months January and February. According to the hydrologic regime, the a wide range of rivers that come across Fushe-Kosovo have the regime of streams. The average of annual flow is 13,94 m³/s (AKMM, 2015). The average flow in Drenice is 2.0 m³/s (Qyqalla E, 2012). The

average annual rainfalls are 620 mm (PZHK, 2013-2023), whereas the average annual temperature is 9.8 °C (SKZHE 2016-2020).

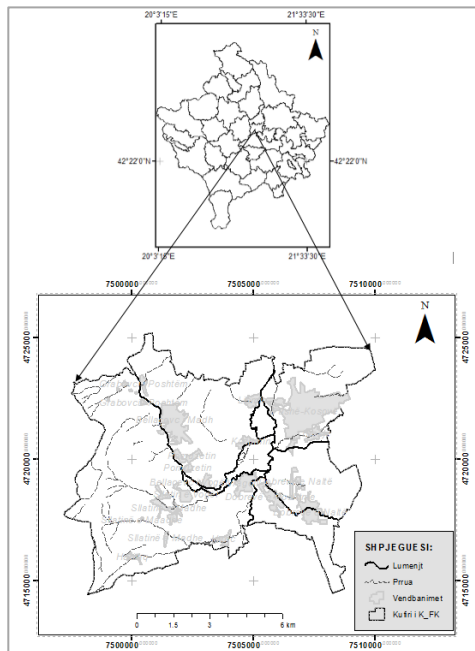


Figure 5: Position of territory in Fushe-Kosovo Municipality

METHODOLOGY AND MATERIALS

It has been applied a developing methodology which reflects a systematic work based on observations that have been carried out in terrain, by also using the most up-to-date analog practices. The Anaysis Method is mainly a quantitative one, with the utilization of precise quantitative data. The type of reseach or Inquiry is related to the aspect of that has to do with institutial gathering of institutional and scientific materials (Jakupi A., 2005). There are exploited documents taken from archives, strategic documents, developing plans, normativ acts, as well as relevant data provided by governmental and academic institutions.

Fulfillment of the paper is done following the steps as below :

- Gathering, systemizing and analyzing the data and preliminary materials that are closely related to floods, water flows, data of the previous years.

- Observations in terrain and floods that aimed to identify and determine the segments of rivers in order to take preventive measures
- Elaboration of analytic material and observations from terrain.

RESULTS

The activities that were elaborated aimed to aid and contribute to the prevention of floods during 2014-2015, in the territory of Fushe-Kosovo municipality. There were taken certain measures to provide protection from the Drenica river. In order to achieve satisfactory results, were taken important steps such as a general cleaning of the river bank in the village called Graboc i Eperm with a length of 200 meters, as well as in the segment called Bardh i Madh until Grbovce with a length of 500 m. In this segment are carried out many interventions, including the throwing of the waste, wastes that come as a result of building and paring the plants in both sides of the river, due to the systematic diggings aiming a further widening and deepening of the river bank. Nevertheless, there have been taken efforts to repair and cleaning the segment of Pomazetin village until the village Bardh i Vogel with a length of 300 m, and Bardh i Madhe with a length of 500 m. In addition to the activities with a special focus on repairing this segment and is also built a an engineering object responsible to outerwear the escarpments in both sides of the rivers of the village Bardh i Vogel. The measures for protection from river flows in the river of Graçanka as well measures for prevention from Graçanka have been constructed and planned in a length of 2 km. The wide range of these measures were committed with the purpose of cleaning, deepening and repairing the river bank. There have also been taken measures for minimizing the consequences of flows and in the floods Zanoga in the Hence village, with a length of 3 km, the flow that continues in the Sllatina e Madhe and Sllatina e Vogel village 3km. beside this, there have been carried out repairing processes even in Bardh i Vogel and Kuzmin village with 4.5 km (Fig.6).

In this perspective there have been taken respective measures for facilitating the consequences caused by the floods and the excessive water flows. The measures were closely related to undertaking actives that had to do with the evacuation, providing the first aid and supplying the inhabitants of these areas.

In the framework of this measures taken after the occurrence of floods aimed to aid the endangered persons from floods, to fulfill their rudimentary needs, including rehabilitation, estimation of damages etc. Moreover there have

been carried out measures to minimize the consequences, the high economic cost etc.

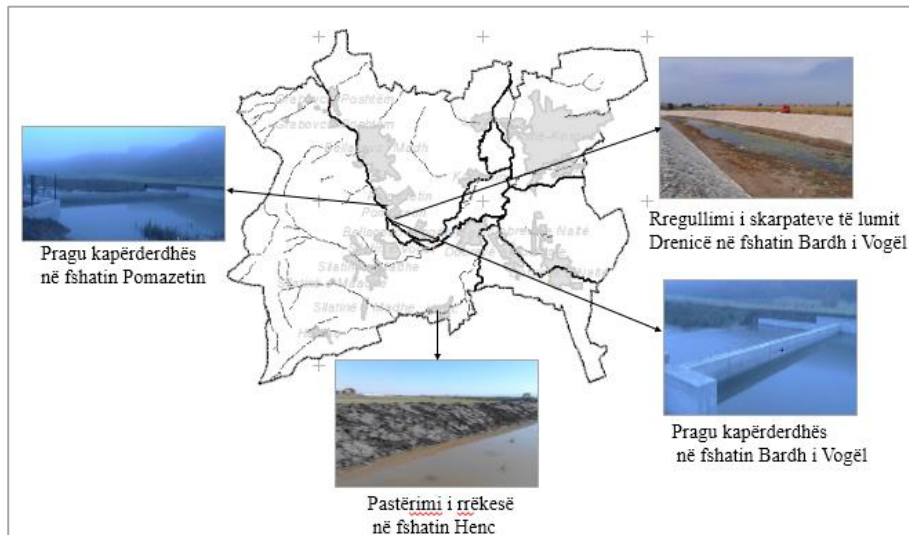


Figure 6: Graphic reflection of some river segments have taken the necessary measures to preserve the soil from floods.

CONCLUSIONS

The territory of Fushe Kosova Municipality throughout its history, but is also affected by floods. Firstly, it is important to take measures, which are mainly focused on the protection of human health and life. Secondly the preservation and protection of material goods such as economic, agricultural, environmental, cultural, heritage, etc. It has been concluded that through carrying out measures for regulating and expanding the river beds and shores to a certain extent, has minimized the possibility of occurrence of floods in the territory of the Municipality of Fushe Kosova. There is also witnessed an increased range of safety levels, which are taken from the community members who live near the segments that are endangered from floods. This prevents the possibility of contamination of wells which preserve the drinking water, and that the community in the vicinity of the flooding segments that use for water supply, considerably reduced of the overgrown and floody areas of agricultural lands. The measures taken have also resulted in the reduction of the operational and financial costs for the municipality's own budget, which in such cases went to compensate the community affected by floods. These measures will also serve as a lesson for the further

steps and other actions that will be taken in the framework of minimizing damages from floods in the administrative territory of the Fushe Kosovo Municipality.

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