80 Years since the Death of Nikola Pushkarov - Founder of Soil and Earth Science, and Fighter for National Unity

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It has been 80 years since the death of the prominent Bulgarian scientist, naturalist, founder of Bulgarian soil science, patriot and fighter for national unity, public figure, national awakener and revolutionary Nikola Pushkarov.

Pushkarov is one of those individuals who do not fit their life and deeds into a certain framework, and with their ideas and struggles they remain an example to be followed for centuries. In societies filled with injustice and spiritual emptiness, they remain misunderstood or humiliated during their lifetime. In the past and now, the examples are many. I take the liberty of writing words of praise and recognition for the man whose life and work have been strewn with unprecedented difficulties and fateful vicissitudes. For the newer generation of Bulgarians, his revolutionary-sounding name means very little. For the beginning of the 20th century, when Bulgaria was reviving and the struggle for the unification of our lands in Thrace and Macedonia continued, the name Pushkarov was completely covered with his innovative and revolutionary spirit.

For a person who shouldered a rifle and dedicated himself to the national liberation struggle, to educational and awakening, and later to scientific activity, there can be no easy and straight paths. Pushkarov's life until the last time was thorny, he became a victim of his faith and had the sad honor of being recognized posthumously, although his entire activity was filled with constant struggle and incredible work in the name of the Fatherland, the disclosure of the riches of the Bulgarian land and its preservation and protection.

Nikola Pushkarov was born in the town of Pirdop in a family of prominent Bulgarian revolutionaries and supporters of freedom and national independence. Great historical figures and factors influenced his development - his father Petko Pushkarov, a prominent public figure before and after the Liberation, his teacher - the writer Todor Vlaikov, the legendary voivode Gotse Delchev and the famous German (Ramanov) Institute in Munich, where he conducted a long-term specialization, the progressive intellectual and scientific elite from Sofia University and BAS, with whom he did not break his ties from his studentship until the end of his life. The implacable spirit towards injustice caused him to publish newspapers and organize progressive student struggles even in high school, which is why he successively changed high schools in Sofia, Sevlievo, Plovdiv and Tarnovo. Although an excellent student, wherever he was transferred, his report card said that he was a "rebel against the authorities". He graduated in Varna, where he became friends with Metodiy Popov, (later academician and founder of the Institute of Biology) and Vasil Kolarov. In 1896, he was accepted as a natural science student at the Higher School in Sofia, and during his studies he became a favorite of Academician Georgi Bonchev, who invited him to study together the petrography of the Central Balkans, Vitosha and Rila. In the Higher

School (Sofia University) he was the founder, together with M. Popov, R. Popov and Iv. Ploshakov (later famous scientists) and leader of the Society of Naturalist Students, a participant in the student struggles against the Radoslav regime. As a graduate student, after graduation he received a personal invitation from the then Minister of Education Petko Karavelov to work in the Ministry, but he refused and returned to his hometown Pirdop as a teacher. He developed a wide cultural, educational and political activity, for which he was brought to court. Personally, Petko Karavelov, already as Prime Minister intervened and the charges were dropped. As a teacher and organizer of the teacher's movement in Pirdop, Plovdiv, Sofia, Pleven and Vidin and Chairman of the teacher's association in the Central Highlands, he was fired more than once. He was also persecuted as a prominent lecturer of the cultural and educational societies and founder of the "Oralo" Mutual Aid Society with 63 members in his hometown, because he protected them from moneylenders. Pushkarov organized his fellow teachers and in one month they made 30,000 bricks for the company's building for free. It should be noted that in Vidin he is co-editor of Zdrave magazine, founded the National University and is a beloved lecturer, an authority of the city. Here he carries out hydrological studies and develops a project for the city's water supply. Unfortunately, this project is carried out by the highly paid Austrian professor Farhamper, who receives the huge fee. Pushkarov recommends building suitable dykes and belts in the Vidin field to protect the land from the waters of the Danube and the north wind. Wherever he taught, he remained in the minds of his colleagues and students as a teacher with "great intelligence and education, high culture and knowledge". Despite the low pay of his teaching job, he helps his poor but studious students with the means to complete their education. In 1902, during a personal meeting with Gotse Delchev and on his advice, he decided to go to the southwestern Bulgarian lands (Macedonia), located within the borders of the Ottoman Empire. His desire is to work in Bitola as a teacher and participate in the fight against pro-Serbian propaganda and the "Serboman" question. By an act of the Bulgarian Exarchate, he was sent as a natural history teacher to the Men's Pedagogical School in Skopje to lead and participate in the preparation of the Ilinden-Preobrazhensky Uprising. Here he began to publish the magazine "Osvobozhdenie", together with Struga-born teacher at the Skopje Girls' School Slavka Chakarova, who four years later became his wife, as well as Lyuba Kuileva from Veles and Yanka Kanevcheva from Ohrid. The revolutionary environment in which Pushkarov worked included fighters, teachers, craftsmen, young people from the outskirts of Skopje and the nearby towns and villages - Tetovo, Kumanovo, Kočani, Kratovo and Palanka. The revolutionary and printing activity did not remain hidden from the Turkish administration, but thanks to the brave women around him and his companions in propaganda and struggle - the teacher Dimitar Galev from Skopje, Iliya Rashtinov from Veles, Kiril Stoyanov from Mavrovo and Dimitar Ganchev from Ruse, he remained unharmed after several searches and searches. At the same time, he was elected chairman of the Skopje Revolutionary Committee. He roamed as a voivode with a band of 11 men in the mountains and the surroundings of Skopje to avenge the "depredations of the Turks" and organize the uprising, and his love of petrography led him to collect rock samples in his backpack. For some time he returned to the Principality to attract more Chetniks and worked on sending weapons and "hell machines" and the production of cyanpotassium at Sofia University. During the uprising, the squad grew to 25 insurgents, armed it with the necessary weapons - 200 bombs, 7 loads of dynamite and hydrogen cyanide. Already on August 3, he organized the explosion of a train composition of 32 wagons, the Skopje-Veles railway line, destroyed the security department of the bridge over the Vardar river, fought battles with Turkish troops in the Veterski and Gyurishki monasteries and other areas. The just struggle for independence of Bulgarians and

Turks is briefly reflected in his memories: "We fought for the freedom of both". After the failure of the uprising, Voivode Pushkarov in the fall and winter of 1903-1904 organized several meetings of the Skopje Revolutionary District together with Hristo Matov and Dr. Hristo Tatarchev, how to continue the struggle. Returning to Bulgaria, he maintains a relationship with Yane Sandanski and hides him in his home in Sofia on "Ivac Voivoda" Street. As one of the leaders of the four and an active participant in VMORO, on March 9, 1919, Pushkarov was among the 17 former voivodes, including Gyorche Petrov, Mihail Gerdzhikov, and others, who signed a special appeal to the Macedonian population and emigration to Bulgaria. His relationship with these revolutionaries and his joint activity with them did not go unnoticed later in scientific circles by cabinet professors. The fear of the patriot and the fighter for a united Bulgaria and the envy of the innovative scientist and "uncomfortable opponent in science" makes them pursue him all their lives. His work as a teacher in his hometown and especially in the period 1904-1908 in the country and as a deputy head in the Ministry of Public Education in 1909-1911 could not stop him from thinking about the scientific ideas planted by his mentor and Professor at the University of Academician Georgi Bonchev. Without being appointed as a researcher, in 1909 he wrote the capital work "Formation of the soil" and thus started the study of the genesis and origin of soils. After this period, active scientific research, journalistic and public activity began. He edited the magazines Natural Science and Geography, Chemistry and Industry, where the biggest representatives of science at that time collaborated - As. Zlatarov, G. Bonchev, P. Bakalov, Z. Karaoglanov, M. Dimitrov, St. Petkov, R. Popov, Zh. Radev, G. Shishkov and other famous natural scientists. Pushkarov was the first editor of the "Journal of Agricultural Testing Institutes in Bulgaria", the first translator in our country of "Origin of Species" by C. Darwin. He was several times elected Chairman of the Bulgarian Nature Protection Society and is one of the founders of the Geological Society. At his suggestion to the Minister of Trade and Agriculture, in 1911 a Soil Science Section was opened at the Agricultural Experiment Station in Sofia. This historical date is considered the birth of Bulgarian soil science, and the head of the section is the first soil scientist in our country. Today, when so many years have passed, his statements about the origin and classification of soils, mineral fertilization and fertilizer requirements of crops, acidification, salinization, land reclamation and tillage, drought control, chemicalization and irrigation, zoning of agricultural crops are still not outdated. etc. All these topics are still relevant today. Pushkarov was the first scientist in our country who established the basic regularities of the geographical distribution of soils and proved the agro-ecological approach to their use. He developed the first National Soil Map and the first methodology for credit assessment of agricultural land, which he implemented in the municipalities. Thus, he is rightfully recognized by the new generations of researchers as the Patriarch of Bulgarian soil science.

After specializing in Germany in 1914-1915, he became thoroughly acquainted with the Russian Dokuchaev school, and continued to carry out a large-scale scientific program for the study of soil and land resources in the country. The recollections of one of them - the agronomist Georgi Ivanov Popov - bear witness to the studies and meetings with the farmers. He points to Pushkarov's "lively interest and direct involvement in the work" that he showed during soil studies and the implementation of the methodology for bonification of agricultural lands in settlements. Pushkarov consistently published soil-geological and soil sketches, works and studies for different regions of Bulgaria. Broad general culture and comprehensive agro-soil and agro-biological research established his great authority as a scientist and researcher at the Agricultural Experiment Station, and in 1919 he was appointed director of the station, after a unanimous vote of his colleagues. According to his report, the station was reformed into an Institute in 1920 with

8 scientific departments. Academician Kiril Pavlov highly appreciates his activity as director: "It was a real happiness for the Institute that during this period a person like N. Pushkarov stood at the head. Excellently prepared, persistent as a scientist, progressive and good, but firm and consistent person, managed to raise the Institute to a great height as a scientific research institution in a short time". The coup of June 9, 1923 found the Institute in a great upswing, for which Pushkarov has merits. According to Academician M. Dimitrov's recollections, shortly before the coup, he led a scientific controversy with two scientists, one of whom was Prof. Yanaki Mollov. After becoming the Minister of Agriculture, he dismissed Pushkarov for political reasons and took away the land he managed to secure for the construction of the institute's building. The prominent Bulgarian historian and philosopher also wrote: "The selfless and selfless scientist was deprived not only of the opportunity to continue his scientific research, but also of a piece of bread. Pushkarov was proud, he did not go to pray to anyone, nor did he send anyone to pray for his return. He spent dark days when his family had nothing to eat". As a result of the difficult living conditions, the illness and death of his only 20-year-old daughter. He was reinstated after 4 years, in 1926, as head of the Soil Department. With extreme material and personnel shortages, very often alone and with his own funds, he continues the soil surveys in the country for their comprehensive study. Promotes the ideas of collective cultivation and land consolidation. In 1931, he issued the first Soil Map of Bulgaria in M. 1:500000 in Bulgarian and German, for which he took out a loan from the Yuchbunar Popular Bank against a mortgage on his home, which he paid until the end of his life. This example of selflessness and devotion to science, the Bulgarian land and its people far exceeds ordinary moral norms. At that time, his works were read in Europe and the German professor H. Shtreme used Pushkarov's Soil Map to develop a Soil Map of Europe. He promoted the latest works of a number of Russian and Western scientists (Gedroits, Sigmond, Lemerman, Blank, etc.). Despite everything done by the great scientist, after the political coup on June 19, 1934, the opportunity for research work was again taken away by the reactionary representatives of the Faculty of Agronomy and Forestry, headed by Yanaki Mollov, who did not share his views on science. He retired prematurely, but continued to explore the country's soils with his own funds. In 1940, progressive specialists from the Ministry of Agriculture appointed Pushkarov as a laborer (what a humiliation!) to the Soil Department of the Agricultural Testing Institute with the task of developing a new soil map. Recently, the fascist minister Hr. Petrov, who immediately removed Pushkarov from work on the denunciation of one of his students/late professor in the Public Polytechnic of Hydrotechnical Faculty of today's UASG/ and a group around him. Deeply embittered by another blow, he continued to work in his home study and alone, with the meager pension and with the help of many good people in places, continued to explore the soils of the Danube plain. He spent his last savings, but the second national soil map in Bulgaria remains unfinished. After decades of soil research across the country, it continues to be respected and sought after by science and practice. At the invitation of residents of the village of Ladzhene (today a district of Velingrad), in 1942 he explored and discovered the warm mineral springs for the teachers' sanatorium that was built at the time. In the same year, he gave serious support to the commissioning of the chalk-lime production in the town of Slivnitsa. Although in very poor health, he worked until the end to issue the Second National Soil Map and support his family. He died at his desk on 19.02.1943 in deprivation and misery, but proud and with dignity, with an honestly traveled path in science and in the fight against internal and external enemies. Today, when we turn the pages of his many works and admire his deeds, we ask ourselves: why did his life go like this. The answer is one - Pushkarov was a person with innovative solutions to vitally important and national problems, a

person who was a thorn in the side of pygmies in science and politics. And the brighter the personality, the more it irritates small and inferior people. This irritated them, and they held him in their sights, although he never belonged to any party, but was a democrat by nature, had purely populist ideas, and defended the enslaved, the poor, and the wronged with gun, pen, and word. This is never forgiven - before and now. This is what his fellow citizen, the poet Veselin Andreev, wrote: "Pushkarov was a strong man. Life had taught him to endure everything firmly with inner conviction and pride. He had suffered not only in his youth. They harassed him even in his advanced age, when with youthful energy, with admirably devoted love of his science—what a splendid example for the present generations! - traveled around the country in murderous conditions, did research". Pushkarov did not live to receive recognition for his major work. Only when the Bulgarian-Soviet soil expedition took place in 1947, prominent Soviet scientists and academicians I.P. Gerasimov and I.N. Antipov-Karataev gave a high and well-deserved assessment of his overall activity. In 1948, his name was given to one of the most important agricultural institutes in our country - the Institute of Soil Science. 104 years after the writing of the capital work "Soil formation", the UN General Assembly, with a Resolution of the 68th session of 20.12.2013, decided that December 5 will be celebrated annually as World Soil Day, and 2015 will be declared the International Year of the Soil. What international recognition and appreciation for the importance of this unique natural resource for feeding the population of the Planet! What foresight of the great Bulgarian scientist Nikola Pushkarov to start the study of soil and land resources more than a century ago!