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Review Article

Impact of climate change in Southeast Europe; adaptation policies, environmental and human security, and normative resolutions

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ABSTRACT

This paper examines the impact of climate change in the Balkans on the different macro components of human and environmental security: the environmental dimension, the state's adaptation policies, and crisis management for the signified imperatives of mitigation describing impacts on different divisions offering normative resolutions. A comprehensive analysis of climate change in the Western Balkans has identified human health, security, and quality of life as highly vulnerable to natural disasters and weather changes. The agricultural sector, forestry, water management, free-flowing rivers, and Adriatic sea tourism are the ones that will suffer the most significant consequences. It is essential to follow the provisions of the Paris Agreement; climate-neutral green economies. It is required to build the necessary capacity, determining a general policy course for low-emission development resilient to climate change. As Western Balkans is the region facing a real threat posed by climate change, it is necessary to more actively promote the concepts of environmental protection, conservation of resources, and the use of renewable energy sources. At the institutional level, it is necessary to promote the concept of human security policies through laws and other acts or to incorporate it into existing ones; identify the most vulnerable sectors; make risk and vulnerability assessments, and action plans that will more actively oppose climate change. It is critical to integrate specific policies and projects into strategies, identify existing adaptation opportunities to mitigate climate change and ensure international support. Recent plans for exploiting all rivers are a critical factor of environmental and human insecurity, eradicating the European "blue heart," not correlated to the environment or hydro-energy but systemic corruption. Through joint action and approach, it is possible to limit the consequences and work on capacity building, creating a more resilient community capable of protecting its citizens by implementing human security conceptualization. Action plans are needed to build more modern defense systems to prevent further floods. Given the efficiency shown during the 2014 floods, B&H ethnopolitical authorities' actions, and the complex government, there is a high degree of ethnopolitical manipulation and inefficiency.

Keywords

Climate change

Southeast Europe & Western Balkans,

Adaptation policies

Fragility

Human security & Environmental security

Crisis management

Introduction

The scientific recommendations of Climate Change are explicit. If we want to keep global warming below 1.5 to 2°C and avoid irreversible and catastrophic consequences for our societies, we must achieve climate neutrality by 2050 at the latest. If one carefully considers the arguments expressing climatic "skepticism," one often notices the screening of pieces of evidence while rejecting all data that do not fit the desired picture. It is not skepticism. It is a disregard for facts and scientific evidence. In the eyes of the insufficiently aware public, climate change seems to be a distant phenomenon, affecting distant countries, which is not directly responsible for emergencies, forced migration and does not directly endanger any segment of human life. The reality is different. Measurements of the type of carbon in the atmosphere indicate that the combustion of fossil fuels dramatically increases the concentration of carbon dioxide (CO_2) in the atmosphere. In addition, satellite and surface measurements indicate that additional CO_2 retains heat that would otherwise go into

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space. Several heating patterns are consistent with the enhanced greenhouse effect. Thus, the structure of our atmosphere is changing. Climate change and variability are not stand-alone hazards but risk multipliers, which interact with existing and future hazards that ultimately create unprecedented situations that no one may have experienced before. In addition, many studies have shown that farmers already feel production problems related to current climate constraints and face increasing uncertainty when it comes to production. For these reasons, we need a sustainable approach to this problem to ensure agricultural production in the future.

Climate change over the years has been one of the most controversial topics globally. The Paris Agreement sets out a global climate change framework and a legally binding international treaty on climate change. It was adopted by 196 Parties, including most former Yugoslav countries, at COP 21 in Paris on 12 December 2015 and entered into force on 4 November 2016. Its goal is to limit global warming to well below 2, preferably to 1.5 degrees Celsius, compared to pre-industrial levels. In addition, countries aim to reach global peaking of greenhouse gas emissions as soon as possible to achieve a climate-neutral world by mid-century. The Paris Agreement is a landmark in the multilateral climate change process because, for the first time, a binding agreement brings all nations into a common cause to undertake ambitious efforts to combat climate change and adapt to its effects. Implementation of the Paris Agreement requires economic and social transformation based on the best available science. The Paris Agreement works on a 5-year cycle of increasingly ambitious climate action carried out by countries. By 2020, countries submit their plans for climate action known as nationally determined contributions (NDCs). In their NDCs, countries communicate actions to reduce their Greenhouse Gas emissions to reach the Paris Agreement's goals. Countries also communicate and must build resilience to adapt to the impacts of rising temperatures. (UNFCCC, 2020) In line with current climate change manifestations in Southeast Europe, countries in the Western Balkans share worrying future predictions with a- both at the UN General Assembly and in the negative tone of a recent Intergovernmental Panel report. According to experts, the United Nations Framework Convention on Climate Change (IPCC) shares the level of unpreparedness for what is yet to come in this region. (Sostaric, 2019) Climate scenarios predict an increase in the frequency of heatwaves in Southeast Europe in the coming years and decades, depending on the scenario of greenhouse gas emissions. However, the heat is only a part of the changes, and it can be said - a small part of the problem - because high temperatures will necessarily cause several extreme phenomena and weather disasters that have not been common in the Balkan area so far. In general, in the years ahead, we expect an increase in the frequency and intensity of extreme weather and climate events in all seasons, such as an increase in precipitation, which can cause particularly torrential floods, and at the same time, more frequent and more prolonged droughts can be expected. Evaporation due to elevated air temperature is more pronounced than in winter (Pandzic, 2019). Apart from leeches, more intense floods, wind gusts, hail, and periods of drought, will also be a consequence of climate change in the Balkans. Occasional showers are not enough to improve the region's overall climate, so adjusting to new living conditions in the Balkans will become inevitable. Changes are not just happening on land; they also affect the Adriatic Sea. Sea floods are becoming more frequent, which are more pronounced due to the gradual increase of sea level. It can affect the salinization of freshwater aquifers in the coastal area, especially in the mouth of the Neretva River. Salinization destroys agricultural land in the long run. In addition, the increase in CO_2 emissions affects ocean acidity, which endangers the ocean biosphere, which is less known to the public, including the seas and larger lakes. The Adriatic is part of the Mediterranean, which the World Wide Fund for Nature (WWF) claims is becoming "the fastest-warming" and "saltiest" with irreversible changes in marine life, but also human life (Krajinovic, 2019).

As human security became one of the most important political issues in the mid-1990s, the environment became one of the many areas of human security along with it. Environmental change is without a doubt a matter of the human security paradigm. Concerns grew from pesticides to the impact of economic growth on air, water, and soil pollution (Collins, 2010). Human security in its modern form comes from a report on UN political processes in the mid-1990s, notably a 1994 report by the United Nations Development Program (UNDP). Here, human security is defined as a condition in which people are freed from the traumas that burden their development. It means security from chronic threats such as hunger, disease, or repression and protection from sudden disturbances of everyday life. Consequently, the first major global summit on environmental issues was the United Nations Conference on the Environment (UNCHE), held in Stockholm in 1972. This event stimulated various research, meetings, remarks, and possibilities of limiting economic development. Unfortunately, Western Balkan states have not yet recognized the importance of environmental security as part of the national security system and legislation. Although there is strong evidence of the genesis, manifestation, and consequences, some scientists and authors deny the view that they violate and negatively affect human security. Thus, Walt (1991) believes that spreading the concept of security, which would include threats such as poverty, AIDS, natural disasters, would lead to excessive stretching of the concept of security, and thus everything would become a threat and make it

difficult to make decisions significant problems (Baysal, 2017). Other primary opponents, representatives of the Copenhagen School of Security, believe that climate change is being securitized, which, following the logic of security, would have problematic consequences such as the militarization of the problem and the legitimization of undemocratic decisions (Trobletta, 2009).

Despite skeptical views that climate change should not be perceived as a security problem, some authors point out that we need to understand that the speed and scale of climate change and the way it affects our habitats, food, and water resources can very quickly undermine economic and political stability in many regions of the world in the coming years. By doing so, climate change will act as a threat booster and make existing problems such as water and food shortages more complex and challenging to solve (Brown et al., 2009). Climate change can affect some or all of the factors at once. States of acute threats such as famine, conflict, and socio-political instability are almost always caused by the interaction of several factors. For many populations and communities that are socially marginalized and with insufficient natural resources, human security will continue to be progressively threatened as these climate changes take hold. Some of these effects are immediately visible and occur very quickly, such as situations where typhoons destroy entire settlements and communities in seconds; Others take place gradually, so drought leads to crop destruction and leaves people without food and income, which further leads to changes in demographics and creates forced migrations and increased urbanization. (FAO, 2021) Countries, in general, do not consider climate change as a natural security threat. It is not the issue that countries historically have been comfortable or have perceived. The issue of climate change as a security threat was not prevailing, and the linkages were more insubstantial in the early stages of international discussions on climate change. Climate change is a multiple threat because of its potential to aggravate many of the present challenges already being faced in some countries, such as infectious disease, terrorism, and conflict over scarce resources. In addition, it can contribute to instability, displacement, migration, worsen existing conflicts and threaten international security. Climate change affects human security, and global temperatures continue to rise globally. The threat to human security will increase correspondingly. Rising sea levels will lead to more coastal erosion, flooding during storms, enduring inundation, and severe stress on natural ecosystems like forests and wetlands.

Adaptation to climate change means "anticipating the negative effects of climate change and taking appropriate measures to prevent or minimize damage which they can cause or take advantage can occur." (EU Comission, 2021). The primary goal of adaptation is to reduce the climate vulnerability of specific areas, economic sectors, and populations. Well-planned and early adjustment measures have been shown to save money and lives later. Measures adaptations may include, for example, investment in infrastructure to ensure protection against natural disasters, the development of effective resource management systems, the strengthening of social protection systems, or the implementation of appropriate measures prevention (e.g., investing in firefighting equipment). Adaptation to climate change differs from climate change mitigation, which aims to reduce emissions into the atmosphere and reduce the current concentration of carbon dioxide (CO_2). Moreover, increasing abysses (e.g., expanding forests to remove more significant amounts of CO2 from the atmosphere). Examples of mitigation measures are increased use of renewable energy sources, application of new technologies such as electric cars, or changes in practices or behaviors (less frequent use of vehicles or change of diet) (UNFCCC, 2009). Thus, mitigation addresses the causes of climate change, and adaptation addresses the impact of climate change. Therefore, reducing greenhouse gas emissions is the top priority of the states.

Nevertheless, while many countries work on proposals and regulations to reduce carbon emissions, the consequences of climate change are becoming a reality. The increase in temperature is accompanied by extreme weather events such as floods, droughts, and wildfires, which become more intense and frequent over time. Climate change and other forms of environmental degradation already have caused net adverse effects on jobs and labor productivity, and these effects are expected to be even more pronounced in the coming decades. Although they affect the whole European economy, some are considered economic sectors, particularly at risk. It is primarily an issue in sectors that are heavily dependent on natural resources, such as which are, for example, agriculture and forestry, but not only they. Rising sea levels, ocean acidification, and changes in ocean temperatures will limit biodiversity and change the distribution and productivity of fisheries. Natural disasters are sure to disrupt sectors such as energy and water supply, construction, transport, and tourism, destroy critical infrastructure and endanger lives, put additional pressure on emergency and rescue services, the health sector, and other public services. At the same time, the adaptation policies require significant financial support. For example, between 1980 and 2011, floods killed more than 2,500 people in Europe, damaged more than 5.5 million, and caused direct economic losses of more than 90 billion euros. The minimum cost of adapting to climate change in 2020 is projected to be € 100 billion, and in 2050 it will be € 250 billion per year for the entire European Union. (European Trade Union Confederation, 2020)

The Western Balkans is an area rich in rivers and lakes. Apart from representing natural beauties, they are also essential biotopes. However, authorities are giving many investors permits to build hydroelectric plants. Rivers are therefore dying out. Environmental groups have counted 1,004 hydroelectric power plants from Slovenia to Greece today, 200 of which are being built, and the final plan is to build about 3,000 such power plants. As many as two-thirds are planned to be built in protected areas, including national parks. The most extreme example is the Valbona National Park in Albania, whose authorities intend to build dams on the Vjosa River, declared an ecological pearl. Mavrovo National Park is the target in Macedonia, with 20 smaller hydropower plants planned. Along with the devastation of the environment, this would probably lead to the destruction of the lynx habitat, a wild cat that was almost extinct on the European continent, and only a few dozen of these animals managed to survive in the Mavrovo area. The hydroelectric power plants or dams that would block riverbeds threaten many fish species. For example, it is estimated that at least two-thirds of the population of Danube salmon or juveniles will disappear if 93 power plants are built on the rivers of the Sava River Basin, as currently planned. (Schwaderer, 2018)

"Rivers in the Balkans are fascinating," says Ulrich Eichelmann, the director of the International river protection organization RiverWatch. "You cannot compare them to rivers elsewhere because they are untouched, from wild rivers in Albania, across the Sava with extensive floodplain forests, to waterfalls and crystal clear streams. The river flows from Slovenia to Greece is a unique natural resource that has not yet been destroyed. However, ecological systems are collapsing, and experts warn that there will be less water and more sun due to the already existing climate changes. When it comes to renewables, the Balkans continue to focus on - hydropower. The hydro-lobby is the oldest and most networked energy lobby globally. Corruption is a significant problem in the Balkans and is challenging to prove. (Eichelmann, 2019) Nevertheless, in a letter to Nature magazine, a group of three scientists recently warned of the dangers of small dams on rivers and called for the preservation of rivers - especially those in the Balkans, which ongoing interventions have not yet damaged. In countries in transition, such as the Balkans, concessions for constructing and using mini-hydropower plants are not "pure business." They endanger water quality areas - some species are disappearing, and others are coming, very often harmful. Also, the destruction of landscapes in the construction of mini-hydropower plants does not stop only at the water - the forest is cut down they work faster and practically bring a net profit to the owner, with inconceivably low risk, which is why there are more and more initiatives to build them. (Leaniz et al., 2019)

Floods may not be the most common natural disaster in the field of hydrometeorological hazards that damage material goods and endanger human lives. However, they certainly endanger social communities and leave the most significant consequences on the broader area, often causing secondary troubles, such as diseases and potential epidemics of infectious diseases. Moreover, it directly causes the loss of human lives. In addition, they have a negative long-term effect on agricultural activity and thus on the economy of the state union. In mid-May 2014, in the northern, eastern, and central parts of Bosnia and Herzegovina (B&H), Croatia and Serbia were the most damaging floods in 120 years. The damage in B&H is three times greater than in Croatia and Serbia combined. One million people were displaced, a third of the economy of B&H was destroyed. The natural disaster affected a quarter of the country's territory and about a million people, approximately 30% of B&H's total 3.5-3.8 million inhabitants. The floods brought enormous devastation to the country, which is still recovering from the effects of the 1992-1995 war, where many people suffer from a perpetual deficit, unemployment, and constant political instability. The total estimated economic damage amounts to more than four billion convertible marks (KM) or 15% of B&H's total gross domestic product in 2014. Heavy rains have caused numerous rivers to overflow their banks, devastating more than 100,000 individual homes and buildings, more than 230 schools, and health facilities and causing enormous damage to farms. (UNDP, 2015) Numerous industrial facilities, traffic infrastructure, were also destroyed. It is a well-established practice in most developed democracies that each state assumes responsibility for the care of victims and timely assistance in emergencies on its territory.

In 2014, this approach was highly questionable during the Western Balkans Floods, particularly in B&H. Political reasons and inter/ethnic hybrid wars can not form the basis for the lack of coordination and integrated approach to crisis management and human security in B&H. (Centri Civilnih Inicijativa, 2014) Post-war Western Balkan, i.e., former Yugoslav countries (presently seven states), are still a politically fragile region, lacking cooperation instruments rooted in ethnonationalism. Western Balkan countries have an issue of deep divisions, which cause major political issues. National divided and contentious political affairs, i.e., disunited ethnopolitics, can challenge human security, environmental security, crisis management, and adaptation policies related to the European Union (EU). Opposing and contending assemblages tend to assume an exclusionary "victor" or status quo procedure, particularly in B&H. These issues include the control of state power, regional geopolitics, cooperation, allocation of resources, and national identity. B&H is the most complex Balkan country; many state subjects are vigorously Constitutionally and

ideologically contested, intricating ethnic, religious, and regional divisions. Consequently, issues that raise the most issues are those regarded essential for the state's sovereignty and existence. B&H, as the most intricate multicultural country of the region, has one of the world's most complex governments and three constituent peoples, Bosniaks, Bosnian Croats, Bosnian Serbs, and unconstitutional "Others." Within the sociopolitical, legislative, and security framework, the "protecting the national interest" paradigm occurs within the (ethnoreligious) political structures. Consequently, it often paralyzes the country. The protection of the national interest (ethnoreligious) of the political structures in the western Balkans, i.e., B&H, is like a non-aggression pact, like a social contract based on Hobbes' model. No one renounces their right to self-preservation but renounces the right to interfere in and prevent others from self-preservation. However, unlike Hobbes' theory, each group is a hostage to the others to protect their national interest (Hadžić, 2021). Like many other issues in B&H, climate change and crisis management in B&H are primarily ethnopolitical issues. It directly affects observed phenomena.

Considering that post-war B&H has one of the most complex constitutional structures, planning and financing in civil emergencies are characterized by a slightly different form of organization and management of this sector. The complexity of the constitutional structure of B&H results in the existence of several similar laws that define the same area but relate to different levels of government. At the very beginning of the analysis of the legislative framework, we must indicate the following: B&H is a state consisting of two entities - the Federation of Bosnia and Herzegovina (Federation of B&H) and the Republika Srpska (RS), and the Brčko District (DB). The federal state of B&H, the complex structure of two entities and one district, the ethnoreligious division, EU and NATO integration, is complicated. At the same time, in B&H, the entities have increased the possibilities of monopoly and power over the territory. B&H ethnonational policies are policies of endangerment within vital national interests. However, unlike Hobbes' theory, each ethnopolitical collectivity is a captive to the other two dominant ethnoreligious parties to protect their national interest. As a national collective's notion of its position, vulnerability closely corresponds to the antagonism that should be understood in society as an inevitable fact, but in political terms, it means the destruction of the political. It implies the totalization of exclusivity, which abolishes politics as the art of balancing between inclusion and exclusion, opening and closing, which is only one of the views of the notion of justice. The war of the 1990s was territorialized but delocalized; today, we have a similar pattern. (Hadžić, 2021) Consequently, civil emergency planning is primarily the responsibility of state institutions, and it is common practice for funds earmarked for this purpose to also be under the control of those institutions. Like many other issues in B&H, water management issues in B&H are primarily political issues. (Centri Civilnih Inicijativa, 2014) Therefore, the existing administrative-institutional structure of the water sector in B&H fully reflects the existing administrative-political structure of B&H. Coordinating activities and activities of international cooperation are within the competence of the state, and those crucial for the human security and living standards of B&H citizens, operational activities related to water management in B&H are the responsibility of the entities and the Brcko District (BD B&H). The climate change in B&H will have consequences for all spheres of society and almost all economic branches, and climate variations are already directly affecting the country. (Sostaric, 2019)

Southeast Europe has various relief, forest, and water resources and numerous species that inhabit them. It is estimated that there will be significant changes in grasslands, coastal habitats, and forest ecosystems in response to changes in the amount and seasonal distribution of precipitation. As climate zones change, some species will adjust their geographical range, while others will not keep up with climate change and will decline. (Institut za gradevinarstvo, 2021) Forests, one of the primary natural resources in Serbia, cover over 32 percent of the territory and are expected to change their composition, structure, and distribution in response to changes in temperature and precipitation. Elevated temperatures combined with more frequent and intense droughts can also increase the risk of forest fires. It directly affects a safe and healthy environment, thus jeopardizing another dimension of human security (Rankovic et al., 2016). Western Balkans and B&H are particularly vulnerable to climate change due to their geographical position, the economic importance of the agriculture and forestry sectors, and their limited capacity to adapt to climate change. Over the past decades, summer temperatures have risen by 1.2 0 C in some places, and precipitation regimes have changed. A change in temperature of 1.2 0 C may seem unimportant, but a drop in temperature of 1 0 C caused the European Little Ice Age in 15-17. century. Changing these proportions can have significant impacts. The adverse effects of climate change are already visible in B&H, although it contributes little to the causes of climate change. Emissions per capita are just over half of the European Union average: 5.18 tonnes of carbon dioxide equivalent per capita (CO2 eq/capita) per year in 2008, compared to the European Union average of 9,93 tons of CO2 eq/capita. However, if a comparison is made concerning relative wealth, emissions in B&H are almost four times higher than in the European Union. (Radusin et al., 2013)

Effective implementation of the Climate Change

Adaptation Strategy requires more financial resources than those currently available in Western Balkans countries, particularly B&H. Additional resources will need to be provided to enable the late implementation of this Strategy and related programs and plans. Funding should be sought from financing agencies and the private sector regarding infrastructure investments and the benefits of business opportunities some of the climate change adaptation measures offer. It is necessary to emphasize the possibilities of financing, public-private partnership, and economic activity of social enterprises. Innovative partnerships must develop with multilateral financial agencies and their development assistance options in the context of developing resilience to climate change. Measures envisaged in the framework of climate change adaptation could offer business opportunities for B&H. They are not just a requirement for donor assistance and loans. Co-financing arrangements will be required from major donors and, for example, the Green Climate Fund (GCF) (Radusin et al., 2013).

All these effects of climate change on health security, economic, food security, and a healthy environment compromise the security of the individual because they are often deprived of some of them. Moreover, if more than one individual is affected, we cannot talk about community security. Finally, if the states cannot ensure that their individuals live in a healthy environment, have access to resources, a secure supply of food, their economic needs are met, and adequate health care is provided, then the security of these individuals is threatened. The Strategy of adaptation to climate change, including negligible for this region, low-emission development, is the first step to establishing a feedback-based management process. However, there is insufficient data, and domestic capacities are mainly limited to NGOs. Climate change refers to strategic, long-term, centralized, globally level issues with defined goals and vision solutions. Although the intensity and direction of climate change are questionable and the subject of numerous debates, there is still agreement that something is happening that requires a specific action, both individual and company, and government. Some Western Balkan countries, i.e., B&H, has strategic and action plans in most cases created under pressure from the international community; however, they are often unrealized and dysfunctional. Moreover, the joint Strategy of Western Balkans countries is an initial step designed to consolidate political support for resilience to climate change. Gathered by many external reports, Western Balkans lack awareness of the importance of climate change and financial and professional human resources to deal with the consequences of these changes.

This paper examines the impact of climate change in the Balkans on the different macro components of human and environmental security: the environmental dimension, the state's adaptation policies, and crisis management for the signified imperatives of mitigation describing impacts on different divisions offering normative resolutions. A new framework, discourse, and thinking about security threats is required, as a poor security policy over the environment and nature can cause many instabilities. The general impression is that environmental security is still not sufficiently affirmed but not precisely defined. This fact leaves room for further research and efforts of the academic and professional community in the new field of security.

A Review-of-Literature or methodology

A Review-of-Literature more specifically synthesizes information from a variety of significant sources related to the major point of the paper. The paper is based on secondary data analysis, current literature review, and theoretical and legislative discussion within additional consideration of the massive floods and 2014 Balkan crises. By presenting and analyzing climate change conditions and policies in Southeast Europe, i.e., the Western Balkans, for the signified imperatives of mitigation, adaptation policies, environmental and human security, and crisis management, the paper describes impacts on different divisions and offers normative resolutions. Furthermore, the paper presents insight into the impacts and consequences of climate applications in the Balkans for the frameworks most exposed to these changes.

Theory/calculation

If one carefully considers the arguments expressing climatic "skepticism," one often notices the screening of pieces of evidence while rejecting all data that do not fit the desired picture. It is not skepticism. It is a disregard for facts and scientific evidence. In the eyes of the insufficiently aware public, climate change seems to be a distant phenomenon, affecting distant countries, which is not directly responsible for emergencies, forced migration and does not directly endanger any segment of human life. The reality is different. Measurements of the type of carbon in the atmosphere indicate that the combustion of fossil fuels dramatically increases the concentration of carbon dioxide (CO_2) in the atmosphere. Although there is strong evidence of the genesis, manifestation, and consequences, some scientists and authors deny the view that they violate and negatively affect human security.

A new framework, discourse, and thinking about security threats is required, as a poor security policy over the environment and nature can cause many instabilities. The general impression is that environmental security is still not sufficiently affirmed but not precisely defined. This fact leaves room for further research and efforts of the

academic and professional community in the new field of security. Thus, Walt (1991) believes that spreading the concept of security, which would include threats such as poverty, AIDS, natural disasters, would lead to excessive stretching of the concept of security, and thus everything would become a threat and make it difficult to make decisions significant problems (Baysal, 2017). Despite skeptical views that climate change should not be perceived as a security problem, Brown points out that we need to understand that the speed and scale of climate change and the way it affects our habitats, food, and water resources can very quickly undermine economic and political stability in many regions of the world in the coming years. By doing so, climate change will act as a threat booster and make existing problems such as water and food shortages more complex and challenging to solve. Moreover, climate change can affect some or all factors at once. In the UNDP report, seven related elements of human security can be identified: economic security, food security, health security, environmental security, personal security, social security, and political security (Collins, 2010). Countries, in general, do not consider climate change as a natural security threat. It is not the issue that countries historically have been comfortable or have perceived. The issue of climate change as a security threat was not prevailing, and the linkages were more insubstantial in the early stages of international discussions on climate change. Human security is a broad phenomenon that is jeopardized by prolonged crises, conflicts, natural disasters, epidemics, underdevelopment, and socio-economic fragility.

States of acute threats such as famine, conflict, and socio-political instability are almost always caused by the interaction of several factors. For many populations and communities that are socially marginalized and with insufficient natural resources, human security will continue to be progressively threatened as these climate changes take hold. Southeast Europe is profoundly vulnerable. The literature lists many adaptation measures and practices, depending on the form (technical, financial, management), scale (global, regional, local), and participants (farmers, government, private sector). For example, the climate change Adaptation policies reduce the vulnerability of specific regions, human security, and economic sectors to climate change. As a result, the benefits of adaptation policies are more significant than the financial sector, i.e., outweigh their costs.

Western Balkan countries have an issue of deep divisions, which cause major political issues. National divided and contentious political affairs, i.e., disunited ethnopolitics, can challenge human security, environmental security, crisis management, and adaptation policies related to the European Union (EU). Opposing and contending assemblages tend to assume an exclusionary "victor" or status quo procedure, particularly in B&H. These issues include the control of state power, regional geopolitics, cooperation, allocation of resources, and national identity. B&H is the most complex Balkan country; many state subjects are vigorously Constitutionally and ideologically contested, intricating ethnic, religious, and regional divisions. The cessation of the threat is the end of the collective, and members return to a natural state that now corresponds to Rousseau's preoccupation with himself and indifference to other members of the same collective, which leaves the elites unlimited space to act in self-interest. The protection of the national interest (ethnoreligious) of the political structures in the western Balkans, i.e., B&H, is like a non-aggression pact, like a social contract based on Hobbes' model. No one renounces their right to self-preservation but renounces the right to interfere in and prevent others from self-preservation. However, unlike Hobbes' theory, each group is a hostage to the others to protect their national interest (Hadžić, 2021). Like many other issues in B&H, climate change and crisis management in B&H are primarily ethnopolitical issues. It directly affects observed phenomena.

Abbreviations

SEE-Southeast Europe

B&H-Bosnia and Herzegovina

FB&H-Federation of Bosnia and Herzegovina

RS-Republic of Srpska

BD B&H-Brčko District of Bosnia and Herzegovina

EU-European Union

USAID-United States Development Agency

WWF-World Wide Fund for Nature

Results and Discussion

Human security is a broad phenomenon that is jeopardized by prolonged crises, conflicts, natural disasters, epidemics, underdevelopment, and socio-economic fragility. Climate change can cause current insecurity, such as hunger, conflict, and socio-political instability, and almost always occur with multiple factors. For many socially marginalized populations, dependent on natural resources and having limited assets, human security will progressively be undermined as the climate changes. These consequences are reflected in reducing food quality, soil erosion and degradation, the spread of wildfires, degradation and disappearance of forest resources, insufficient amounts of drinking water, and finally, health consequences - heatstroke, the spread of vector, and infectious diseases (The Intergovernmental

Panel on Climate Change IPCC, 2021).

In addition to the direct consequences climate change has caused, they also bring challenges to control infectious diseases. By problematizing climate scenarios, changes can be expected in the prevalence and increase in the frequency of vector-borne infectious diseases (malaria, dengue fever, West Nile virus) and the spread of water-borne infectious diseases (cholera and diarrhea). In addition to the most apparent effects of health problems and the emergence of infectious diseases, climate change also directly affects the economic sector. Climate change is slowing economic growth by causing changes in ecosystems and resource availability. It further affects economic growth through supply-demand relations, then in terms of damage or increased investment in infrastructure, and finally, reduces the possibility of creating new jobs. All of the above harms the economy and the economy of the country and directly harms human security. The agricultural sector is directly affected by weather conditions, and if those conditions are unfavorable, it will negatively affect crops, which is further reflected in reduced yields and further in reduced export capacities. A report created by the United States Development Agency (USAID) from 2017, which refers to climate risks, predicts that reducing temperature and precipitation will affect the cereal crops that dominate B&H agriculture. Maize production could fall by as much as 58 percent due to reduced rainfall and higher temperatures during the summer. The increase in temperature has already led to increased fungal diseases and pests that reduce crop production. (USAID, 2017). Food security also builds on agricultural production and is evident in how they are linked: from shortening the production season, lack of irrigation water, loss of fertile soil due to desertification or floods, to problems in supply chains. (Advisory Committee on the Microbiological Safety of Food Annual Report, 2018) With the growth of humanity, the consumption of clean water is growing, and increasing amounts of wastewater polluted with various organic and inorganic substances are being created. Water is a highly endangered medium through pollution and pollution. All human activities affect water ecosystems and can endanger freshwater resources, i.e., the quantity and quality of drinking water. In order to actively protect water from pollution, it is necessary to manage water quality, i.e., to monitor water pollution and investigate, plan and eliminate the causes of water pollution.

Climate change threatens human security because it disrupts housing, livelihoods, threatens culture and individuality, increases migration that people would rather avoid, and can undermine the ability of the state apparatus to provide the conditions necessary for human security. The circumstances that served to open the perceptions of both state institutions and the entire public and show what problems we will face soon were the catastrophic floods in the Western Balkans and B&H in 2014. Floods in the Western Balkans and B&H can occur throughout the year and peak in the spring when high precipitation and melting snow from the mountains. Complete list of hydrometeorological hazards in B&H and identified risks are Heavy rainfall, hail, High snow and snowdrifts, and Drought. Identified Landslides hazards in B&H are Landslide Suljakovići-Maglaj, Landslide Mala Broda-Zenica, Landslide Bogatići-Trnovo, Landslide Čemerno-Gacko, Landslide Lopare, and Landslide Zvornik. Besides Croatia, there is a risk of fires in B&H: in the karst area near the settlement, in the karst area in the uninhabited area, in the sub-Mediterranean area, of endangered - protected tree species (Monika), High protective forest fires values, in seed stands, nurseries, and seed trees, in areas exposed to solid erosions, in natural forests on large surfaces, Fires in high forests, in coppice forests, on bare forest land, Fires on meadows-pastures, arable land, (Agricultural fires land), Fires in cultures, Forest fires in the border area, Fires in private forests (Vijece Ministara B&H, 2011). The 2014 floods damaged flood protection infrastructure (mostly embankments). Moreover, it failed to prevent floods due to underground erosion beneath their foundations. The consequences of the floods, except in the most affected municipalities and cities, were felt throughout the country. From the harmful impact on the environment, health, and human lives, through the enormous economic consequences, all citizens have experienced adverse effects. Floods take special care and place when assessing the vulnerability of each country. The leading causes of floods are undoubtedly long and intense periods of precipitation, and in the spring, they can be caused by the sudden melting of snow, while indirectly they can be the result of earthquakes, bursting dams on reservoirs, and similar hazardous situations of other nature. Changes in the precipitation regime certainly create the conditions for their occurrence. According to the latest analysis, intense precipitation is more frequent with large amounts of water sediment. For example, in a B&H city, Banja Luka, on August 29, 2009, 102 l/m^2 of rain fell in half an hour), increased precipitation in a series of three or more days, related mainly to the Genoa cyclones in the autumn rainy season, which torrential streams cannot receive and cause floods. (Vijece Minstara B&H, 2011)

B&H is a sovereign state with a decentralized political and administrative structure within the constitutional construction. B&H consists of 142 municipalities, of which 79 are in the Federation of Bosnia and Herzegovina (FB&H) and 63 in the Republika Srpska (RS) entities. The management of the B&H health care system is decentralized to the level of the two entities and the Brčko District. At the same time, the health of the B&H citizens is endangered by the consequences of the war

and by socio-economic circumstances, unemployment, migration, large numbers of displaced persons, lack of health insurance, and unhealthy lifestyles. In addition, road accidents, physical disabilities, and mental illness are major public health problems. (Vijece Ministara B&H, 2011) All Western Balkan countries have significant issues with corruption. Although B&H as a state has long been taken over by corruption, it has been for an extended period classified amongst captive states according to Transparency International. All Western Balkan countries have significant issues with corruption. Although B&H as a state has long been taken over by corruption, it has been for an extended period classified amongst captive states according to Transparency International. “B&H is one of the countries in which corruption is rapidly worsening, its citizens exposed to life-threatening conditions” (Transparency International B&H, 2021).

The state as a whole has shown unwillingness and lack of resources to deal with the emergency (Centri Civilnih Incijativa, 2014). Without the help of the international community, civic solidarity, and humanity, it is questionable whether the state would guarantee the security of its citizens. Nature showed in May 2014 that it does not recognize any administrative boundaries, and rivers have mercilessly overflowed in both the Republika Srpska (RS) and the Federation of B&H (FB&H). The B&H citizens did not regard which side of the entity border to flee to save lives and material goods. Citizens turned to each other when it was most needed, and in those moments, all administrative boundaries, national tensions, was erased. For example, only in B&H was it easier to declare three states of emergency, in the Republika Srpska (RS), in the Federation of B&H (FB&H), and the Brcko District (BD B&H), instead of the so-called coordination team at the Ministry of Security submitted a request for a state of emergency at the state level. We cannot escape the impression that specific centers of power also saw a danger of the potential possibility of strengthening the power of the state and state institutions and weakening the entity ones. According to the Framework Law on Protection and Rescue of People and Material Goods from Natural and Other Disasters in B&H, the B&H Council of Ministers was formed by the Coordination Body of Bosnia and Herzegovina, consisting of representatives of:

1. B&H Council of Ministers - (nine members),

2. Republika Srpska Government - (five members),

3. Government of the Federation of Bosnia and Herzegovina - (five members), and

4. The Government of the Brčko District - (two members)

No coherent value system would impose itself as general for the collective members and be subject to preservation through legislation. The cessation of the threat is the end of the collective, and members return to a natural state that now corresponds to Rousseau's preoccupation with himself and indifference to other members of the same collective, which leaves the elites unlimited space to act in self-interest. The protection of the vital national (ethnoreligious) interest of the political structures in the western Balkans, i.e., B&H, is like a non-aggression pact, like a social contract based on Hobbes' model. No one renounces their right to self-preservation but renounces the right to interfere in and prevent others from self-preservation. However, unlike Hobbes' theory, each group is a hostage to the others to protect their national interest (Hadžić, 2021). It directly affects observed phenomena. The fact is that the floods and landslides in B&H in 2014 took many human lives. In addition, the financial damage is estimated at almost 4 billion KM (Bosnian convertible mark). The data reflect the final assessment of the damage suffered by domestic institutions and experts of the international community. However, the political elites of entities could not agree on a "national grief day." Therefore, the state of B&H as a whole did not signify during the crisis. For example, the Council of Ministers, the government of B&H, held an extraordinary session only six days after the floods began. The Council did not declare a state of emergency at the level of B&H. However, political reasons and inter/ethnic hybrid wars can not form the basis for the lack of coordination and integrated approach to crisis management and human security. As a result, the study "Floods in B&H - Natural disasters and institutional inefficiency" stated, "we express-open fears that B&H could face the aforementioned worse scenario and a much slower economic recovery (Centri Civilnih Inicijativa, 2014).

For the whole region, the duration of droughts, the frequency of floods from torrents, and the intensity of soil erosion over the next century are expected to increase. In addition, an increase in the frequency of hail, storms, thunderstorms, and maximum wind speeds is expected, which can pose a threat to all forms of human activity and certainly to agriculture (Custovic et al., 2015). Without the help of the international community, civic solidarity, and humanity, it is questionable whether the state would guarantee the security of its citizens. So what do human security and climate change have to do with each other? Human security is achieved when individuals and communities have the solutions necessary to end, diminish or adapt to threats to their human, social, and healthy environmental rights; or when they have the capacity and freedom to practice potential responses to threats and to participate in acquiring the necessary knowledge to do so actively (GECHS, 2013).

Globally, the Intergovernmental Panel on Climate Change addressed security for the first time in a 2015 report, including them in the human security subsection. The report states that climate change will increase the forced migration of people due to a lack of natural resources and extreme weather conditions, both in rural and urban regions and especially in developing countries. Climate change can indirectly increase the risk of armed conflict, civil wars, and intergroup violence by exacerbating poverty and causing economic shocks (McKim, 2015). It is evident that B&H citizens, having in mind the experiences from the past, do not have sufficient capacity to face the consequences successfully. The National Council prepared vulnerability assessments for the hydrology and water resources, forestry, agriculture, and health sectors and confirmed that these sectors were affected by the changed climatic conditions. However, nowhere is it explicitly stated that climate change harms human security, nor is there a strategy to address these adverse effects. In addition to drowning, the indirect danger during floods is the potential contamination of surface and groundwater and surrounding lands with hazardous substances and wastewater. Human health is generally very dependent on weather conditions, but the diseases that are expected to have the most pronounced impact on climate change are:

•asthma, respiratory allergies, and diseases of the respiratory system;

•malignant diseases;

•vascular diseases;

•diet and foodborne illness, heat stress-dependent illness and mortality;

•mental health disorders and stress-induced disorders, neurological disorders, vector-borne diseases, and zoonoses;

•water-borne diseases (Aberle et al., 2012).

Gabriel Schwaderer from the EuroNatur Foundation reminded that his organization, together with River Watch, launched a campaign to preserve the "blue heart" of Europe six years ago, as they described the rivers that exist in the Balkan part of the European continent and have mainly been spared on the hydroelectric power plant. The hydro-morphological potential of the area from Slovenia and Greece is estimated at 35 thousand kilometers in large rivers alone. Schwaderer estimates that about 1,500 kilometers of these rivers have been "attacked" by various projects in the past six to seven years, but most of the river's treasures are still intact, so there is a chance that it will be preserved if it is preserved it reacts decisively (Schwaderer, 2018). The only question is to what extent certain circles in the Western Balkans are aware of risks. Because they are on the best path to sacrifice this wealth-in the name of "clean and renewable energy" and harmonization with EU standards, it is planned to build about 3,000 new dams on Balkan rivers, and in Serbia alone, 856 sites have been identified hydropower plants up to 10 MW. If we examine the context of the Balkan river, a mix of traditional networks within corruption activities has been created. Building a large or small dam takes a lot of concrete and construction work. It usually involves the construction of access roads, tunnels, water mains. It is an expensive job where it is hard to keep track of actual costs. Albania is one of the examples where most concessions for hydropower were issued in the election year. Hydropower plants are given a gift to someone who supported them during the election campaign. It is like giving millions in money. As a result, small-capacity hydropower plants are springing up in the region without order, and river ecosystems are dying, causing artificial floods and endangering human health due to impaired natural groundwater filtration. Hydro-lobbies are well connected with politics, so it was in Tito's Yugoslavia. It already traditionally includes investors, hydro companies, turbine companies, large banks, construction companies (Eichelmann, 2019).

In the global framework, it is to be expected that the probability of occurrence of the most extreme events changes significantly, which can affect performance banks and insurance companies. Furthermore, the manufacturing sector and industry are also exposed, mainly through the spillover effect from those most vulnerable sectors. Adjustment produces positive effects on the economy but also employment. It specifically contributes to the preservation of existing jobs by maintaining the viability and resilience of existing companies. Furthermore, many measures will conveniences require significant investment, which, in turn, can stimulate demand for labor (European Trade Union Confederation, 2020).

A report created by the United States Development Agency (USAID) from 2017, which refers to climate risks, predicts that reducing temperature and precipitation will affect the cereal crops that dominate B&H agriculture. (USAID, 2017) If we use the EH5OM 2 global model, the temperature in B&H increased from 0.7 to 1.6°C between 1 and 2°C along the south coast and between 2 and 3° C in the interior. The highest increases will occur in the summer in the internal areas (Aberle et al., 2012). When we consider precipitation, the result will be a drier climate during the summer (June-August). Precipitation is expected to decrease by 50-100 mm (up to 10%). Seasonally, the most significant effects are expected in the fall, with the level of precipitation falling significantly by up to 25%. Changes in the precipitation regime will also be reflected in the time of occurrence, frequency, and intensity of extreme events-high waters and

droughts. It means increased evapotranspiration and more pronounced extreme minima in the watercourse regime (Custovic et al., 2015).

On the other hand, more frequent precipitation of highly high intensity will cause sudden swelling, often in the form of floods. All this will lead to an even more pronounced intra-annual unevenness of water runoff in B&H. Thus, on the one hand, the availability of water resources will generally decrease in the growing season when water needs are most remarkable, and on the other hand, the risk of floods will be more pronounced. Therefore, B&H is very vulnerable to climate change because it is susceptible to these threats and will be significantly more exposed because the economic role of climate-sensitive sectors, such as agriculture and forestry, has a significant secondary impact. According to the World Wide Fund for Nature (2012) report, in the whole of Serbia in the last 50 years, the average annual temperature has been up to 0.04°C per year. In some areas in the east and southeast of the country, a negative trend of -0.05°C per year. The most considerable increase in temperature is in the autumn. (World Wide Fund of Nature WWF, 2012) B&H has various relief, forest, and water resources and numerous species that inhabit them. It is estimated that there will be significant changes in grasslands, coastal habitats, and forest ecosystems in response to changes in the amount and seasonal distribution of precipitation. In addition, as climate zones change, some species will adjust their geographical range, while others will not keep up with climate change and will decline (Institut za Gradevinarstvo, 2021). In the last 130 years, from 2001 to 2019, at least one record was recorded per month. The consequences are becoming more visible. Climate norms in B&H are changing with increasingly visible consequences. Agriculture is particularly affected (Krajinovic, 2019). Increasingly frequent droughts and floods have caused significant damage in the agricultural sector, from which it is not easy to recover. Prolongation of the vegetation period due to the increase of winter and early spring temperatures leads to a greater possibility of developing diseases and pests. Plant pathogens, pests, and weeds are significant segments affected by future climate change. Climate change will require changes in technology, such as irrigation, and currently, he says, less than one percent of agricultural land is irrigated. All this will increase the incidence of bacteria whose treatment can increase production costs, thus affecting energy efficiency and emissions of greenhouse gases. The impact on biodiversity, habitat reduction, and thus endangerment of plant species and communities is visible. The geomorphological structure of the terrain of B&H is very complex, and the relief as the primary modifier with vegetation determines the microclimatic conditions of each field or river valley. Heatwaves, droughts, intense rainfall, and stormy winds occur. In the last ten years, B&H has faced several special extreme episodes that have caused enormous damage, including human casualties. The most significant was the drought in 2012 and the floods in 2014 (Krajinovic, 2019). Projected changes in precipitation volume and distribution (spatial and seasonal), combined with increases in temperature and evaporation rates, are likely to cause more extreme events (floods and droughts) and lead to a shortage of water available during the summer months, especially in the Mediterranean area and Herzegovina (the most challenging situation will be in the limestone karst areas). Approaches to adapting to climate change are currently limited due to a lack of reliable data, a situation that needs to be addressed urgently. Infrastructure improvements (flood protection and water storage infrastructure) are needed and mechanisms to better manage water supply and distribution (Radusin et al., 2013).

There is a positive trend of precipitation in most parts of the territory in Serbia, while there has been a decrease in Serbia's eastern and southeastern parts. Therefore, according to the A1B1 3 temperature rise scenario projections, relatively consistent growth is expected throughout the territory, with a somewhat more pronounced positive trend in the east along the Danube and in the southwest. It is similar to precipitation. A milder negative trend is expected in the north of the Vojvodina region and some southeastern and eastern areas. In addition to the impact on the economy, changes in biodiversity are expected (Rankovic et al., 2016). Forests, one of the primary natural resources in Serbia, cover over 32 percent of the territory and are expected to change their composition, structure, and distribution in response to changes in temperature and precipitation. Elevated temperatures combined with more frequent and intense droughts can also increase the risk of forest fires. It directly affects a safe and healthy environment, thus jeopardizing another dimension of human security (Rankovic et al., 2016). All these effects of climate change on health security, economic, food security, and a healthy environment compromise the security of the individual because they are often deprived of some of them. If more than one individual is affected, we cannot talk about community security. Finally, if the states cannot ensure that their individuals live in a healthy environment, have access to resources, a secure supply of food, their economic needs are met, and adequate health care is provided, then indeed the political security of these individuals is threatened. Warnings of extremely high temperatures have become commonplace in Serbia. The process of climate change, or better said, global warming, was initiated by excessive emissions of greenhouse gases, which are increasing and bringing terrible consequences to the atmosphere, oceans, sea ice, continental land, ice, and snow. Warm climate zones are expanding towards the poles and in height. In our latitudes, the temperature rises 1.5 degrees in thirty years, the total annual rainfall is almost unchanged, with

the number of rainy days decreasing, and the intensity of precipitation during precipitation episodes increases, which is in line with the increase in temperature because warmer air receives more water vapor. Therefore, we should not be surprised by the floods in Germany or the Balkan region in May 2014. Heatwaves are becoming more numerous, more prolonged, and more intense, so that since 2000, there have been six significant droughts, and one of them in 2012 cost "Serbia's agriculture is two billion dollars (Jovanovic, 2019).

Extreme climatic events negatively affect Croatia's energy production, transmission, and distribution. Reductions in rainfall in the summer cause a lower contribution of hydropower plants with a simultaneous increase in electricity demand in the summer months. By reducing precipitation, a problem with the flow cooling system also arises in the thermal power plant, which harms production. Forest fires are natural disasters that are increasingly occurring due to climate change, leading to other natural disasters, such as drought, changes in soil properties, and changes in biodiversity. Croatian forestry is considered one of the most vulnerable sectors. It is potential the highest probability of shifting the phenological phases of forest trees, reducing the productivity of individual forest ecosystems, higher frequency of forest fires and prolongation of their season, and possible shifting the distribution of forest species and pests, including invasive species. The increased risk of forest fires in Croatia observed in June is significant as it indicates an earlier start to the Adriatic fire season. However, the analysis also shows areas with an increased risk of forest fires from the center to the northern Adriatic, especially in July and August. The increase in the risk of forest fires in the northern Adriatic is due to a significant increase in average air temperature and a significant decrease in precipitation in the summer months (Državnı hıdrometeoroloških zavod republıke Hrvatske, 2009). In case of an increase in the frequency and intensity of negative weather phenomena (ice breakers, windbreaks), more significant damage to forest ecosystems is expected. In the fisheries sector, climate change is putting additional pressure on the marine ecosystem that is already there under the influence of several anthropogenic factors, especially overfishing, habitat destruction, and pollution. The temperature of the Adriatic Sea is likely to rise by 1.6 to 2.4°C by 2070. The consequences are;

•the migration of fish into deeper waters and to the north,

•a more significant number of invasive species,

•a decrease in or extinction of domestic fish species, and

•a change in the choice of species for breeding (SAFU, 2017).

The temperature of the Mediterranean Sea is increasing by 20 percent faster than the global average. As a result, its level is predicted to increase by more than one meter by 2100. Like no other sea, the Adriatic Sea is not an isolated system, so all the pressures acting on the Mediterranean to a greater or lesser extent appear in the Adriatic. Since this is a shallow and semi-closed sea, the risk of severe and lasting consequences of climate change in synergy with intensive human activities such as tourism or fishing has increased, not to mention the exploitation of oil and gas. The high temperatures and extreme weather events are changing the seabed, and that the disappearance of Posidonia, coral, and periscopes would have a tragic impact on the marine ecosystem (Prvan, 2019).

Climate is one of the most critical factors in tourism development and affects tourism trends. Croatia's most significant tourist flows occur in the summer when the sea and the sun are the most crucial tourist products. An increasing number of tourists during an increased number of warm days increases the need for energy and water. In 2015, 94% of total tourist flowed occurred in coastal places. Significant changes in climate elements that will affect tourist trends refer to increased temperature, solar radiation, and a decrease in precipitation, resulting in reduced water availability. Due to climate change, the northern areas of Europe could become more attractive for holidays during the summer months, and the Mediterranean and thus Croatia could become more attractive for the rest of the year (SAFU, 2017). Common vulnerabilities in the health sector are associated with extreme weather events conditions for chronic non-communicable diseases and mortality, changes in the epidemiology of communicable diseases, and impacts climate change on air quality, water and food safety contaminant levels in the environment (Rossati, 2017). It poses a challenge due to the complex interactions of environmental and other health impacts and insufficient health-economic valorization of the impact of climate change on health.

Historically, in Yugoslavia socialism, the idea of linking economics and ecology in socialism was a misunderstanding. In the "workers' desire" to build a new society and raise the standard of living, environmental reasoning was marginalized and hazardous in competition with many labor heroes. In an ideologized society, high party and state bodies obstruct the development of society or the revolution. In such conditions, post-Yugoslav invested all its energy in accelerated industrialization and zealously fulfilled parties, and states tasks did not pay much attention to the environment. Inadequate focus on the environment at the highest levels of political decision-making, lack of environmental expertise the right and limited level of public awareness of the negative impact of environmental

degradation together represent an obstacle to positive change in this sphere (Iordanidi, 2021).

The literature lists many adaptation measures and practices, depending on the form (technical, financial, management), scale (global, regional, local), and participants (farmers, government, private sector). In general, adaptation measures could be divided into seasonal changes and sowing time, the introduction of new varieties, hybrids, and breeds, water supply, and systems for irrigation, management of inputs such as fertilizers, agronomic measures, and modifications or changes to the breeding system. Also, many adaptation and mitigation measures have been developed for specific areas in the world. They are collectively called best practices and are recommended for certain environmental or social conditions in different parts of the world. These measures require significant financial investment, while others require information, awareness-raising, and capacity building to address new practices. Southeast Europe's (SEE) priority in mitigation should strengthen institutional and professional capacities for developing and implementing climate policy, monitoring greenhouse gas emissions, and planning, implementation, monitoring, reporting, and verification of climate change mitigation measures. Awareness of climate change issues and the need for adaptation measures in public and among stakeholders is limited (Radusin et al., 2013). As a result, there is a need for greater involvement of civil society and more vigorous advocacy activities. All of this requires active communication to increase the importance of climate change issues. There is a need for global and regional cooperation on environmental security and security in general. A review of security risks at the national levels and their successful implementation in the entire legislation is needed. Each Western Balkan country must have a ministry to deal with the environment, and the ministries of defense and security must take environmental security as its reference object to which it would be could guide future capacity and capability development (Zizic, 2016).

Conclusion

There is no longer any doubt that the consequences of climate change increase affect human security. For these reasons, climate change and risk management bodies must adapt to climate change. Will shortly additional measures need to be taken to protect themselves health and security of citizens, and policymakers will need to anticipate changes in advance to protect employment in those sectors most at risk. State parties will have an essential role in building more resilient societies, whether through new collective agreements or recommendations for relevant policy measures.

A comprehensive analysis of climate change in the Western Balkans has identified human health, security, and quality of life as highly vulnerable to natural disasters and weather changes. Therefore, Western Balkans should jointly support sectoral interventions to implement climate resilience measures to increase social, security, and material protection. The agricultural sector, forestry, water management, free-flowing rivers, and Adriatic sea tourism are the ones that will suffer the most significant consequences. As Western Balkans is the region facing a real threat posed by climate change, it is necessary to more actively promote the concepts of environmental protection, conservation of resources, and the use of renewable energy sources. From Slovenia to Greece, the construction of more than three thousand new hydropower plants is planned, and the implementation of these projects has catastrophic consequences for the environment. Recent plans for exploiting all rivers are a critical factor of environmental and human insecurity, eradicating the European "blue heart," not correlated to the environment or hydro-energy but systemic corruption. However, unfortunately, it has not been correlated to the environment or energy but systemic corruption and private interest. In order to avoid a destructive future scenario, it is essential to follow the provisions of the Paris Agreement on Climate Mitigation, to gradually introduce climate-neutral green economies by mid-2050. Furthermore, preserving and improving the biosphere, rivers, seas, forests, and meadows is crucial for the region. It is required to build the necessary capacity, determining a general policy course for low-emission development resilient to climate change. Climate change in the Western Balkans contains social and economic consequences. It is necessary to take responsibility for all kinds of modern threats, at all levels, without traditional justifications. A man is an inalienable part of their environment, and these two categories must exist in harmony and respect with each other.

The capacity-building process, combined with the implementation of climate change mitigation measures, will steer Western Balkans on the right path to meeting the conditions for EU membership in terms of legal transposition/harmonization of legislation, administrative capacity, and policy implementation. At the institutional level, it is necessary to promote the concept of human security policies through laws and other acts or to incorporate it into existing ones; identify the most vulnerable sectors; make risk and vulnerability assessments, and action plans that will more actively oppose climate change. In addition, it is critical to integrate specific policies and projects into strategies, identify existing adaptation opportunities to mitigate climate change, and ensure international support.

The paper exposes institutional and political shortcomings in addressing the problems of climate

change in B&H and that the growing risk of climate risks must be adequately communicated. Through Western Balkans countries' joint action and a systemic approach, it is possible to limit the consequences and work on capacity building and create a more resilient community capable of protecting its citizens by implementing human security conceptualization policies. Therefore, activities for repairing existing damages and vigorous action toward preventing new floods, for which there are no guarantees that they will not be repeated soon, must be realized in parallel. Unfortunately, this is not the case in B&H. Action plans are needed to build more modern defense systems to prevent further floods in the Western Balkans. It is a priority, but the authorities should co-ordinate to revise existing and develop new strategies and programs. Given the efficiency shown during the 2014 floods, B&H ethnopolitical authorities' actions, and the complex state structure of government, there is a high degree of ethnopolitical manipulation and inefficiency. Besides, the lack of climate change awareness and other issues characteristic of the Western Balkans question the consequences that the Balkans could face a worse scenario than massive floods from 2014 in the future.

COMPLIANCE WITH ETHICAL STANDARDS

Conflict of Interest

The author declare that there is no conflict of interest.

Ethical Approval

For this type of study, formal consent is not required.

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