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CIVIL SMART DEFENSE IN THE WESTERN BALKANS: TOWARD A REGIONAL MODEL OF DISASTER RESILIENCE

ABSTRACT: Political leadership remains a key factor in social transformations associated with the transition of newly independent states to democracy and the formation of sustainable state institutions. In both processes, the legitimacy of the government, which initiates transformations and directs national development, is of great importance.

For Weber, the legitimacy of government is ensured in three ways: traditional, rational-legal, or charismatic. Charismatic leadership is one of the most common ways of overcoming the difficulties of the transition period in new states. Its feature is a high degree of trust in the head of state or other national leader due to belief in his extraordinary abilities and unique mission. The theory of political charisma had been developed during the 1960s-1990s, mainly in the framework of the functional approach. This approach determined the main criteria of charismatic leadership, the conditions for its emergence, and the evolution of charisma in its routinization. The extent to which external factors condition charisma remains quite debatable. Since most studies concern a charismatic leader's personality and psychological and behavioral characteristics, the problem of public demand for charisma remains insufficiently revealed. This study aims to provide empirical arguments to answer the question of what is primary, the demand for charisma or its offer. Professional sociologists from "SOCIS" group (Kyiv, Ukraine) studied the perception of Ukrainian society of images of leading politicians (presidents and presidential candidates) according to the criteria of compliance with the charismatic type of leadership. The main conclusion from the study is that under certain conditions, society endows all possible virtues of a leader entrusted with the function of charismatic leadership. This high assessment of the leader's characteristics and trust in his good intentions (mission) is irrational due to the need to solve this community's fundamental tasks.

KEYWORDS: Western Balkans; smart defense; disaster management; cross-border cooperation; EU Civil Protection Mechanism; institutional resilience.

1. Introduction

Over the past decade, the Western Balkans has faced a series of high-intensity natural disasters with wide-scale humanitarian, economic, and security implications, putting to test the institutional capacities, civil protection systems, and regional cooperation mechanisms of the states in the region. The 2014 floods that struck Serbia, Bosnia and Herzegovina, and Croatia, the devastating 2019 earthquake in Albania, and the recurrent wildfire seasons across the Adriatic after 2021 illustrate a new operational reality: crises do not

recognize national borders, and effective response increasingly depends on integrated capacities, cross-border coordination, and shared risk-management infrastructure.

This vulnerability is compounded by structural factors including seismic exposure, accelerating climate shifts, rapid and often unregulated urbanization, and ageing critical infrastructure. According to UNDRR (2022), Southeast Europe experiences climate-related risk escalation at a rate above the European average, while World Bank assessments (2023) indicate that more than 60% of the urban population lives in zones highly exposed to floods and seismic hazards. Disaster management in this context is not only a humanitarian or development challenge, but also a core pillar of regional security and institutional stability.

Despite shared risks and similar vulnerabilities, crisis responses in the Western Balkans have historically been fragmented, constrained by asymmetrical capacities, lack of standardized procedures, and legacy political and administrative challenges. While EU member states rely on mechanisms such as the EU Civil Protection Mechanism, RescEU, and Copernicus, the Western Balkans' full integration into these structures remains ongoing, shaped by different membership statuses and uneven reform trajectories.

At the same time, recent crises have demonstrated that regional cooperation is both possible and operationally effective. The immediate support from Kosovo, North Macedonia, and Montenegro following Albania's 2019 earthquake, as well as coordinated interventions during the 2014 floods, exemplify practical solidarity that went beyond political symbolism. In Albania's case, over 30 international rescue teams and hundreds of emergency professionals were deployed (NCPA, 2020), confirming the importance of pre-established operational agreements and interoperable mechanisms. In this context, the Smart Defense concept — central to NATO's transformation through "pooling and sharing" — provides a valuable analytical and strategic lens for disaster resilience in the Western Balkans. Rather than maintaining isolated national capabilities, Smart Defense advocates for joint capacity development, resource pooling, standardized protocols, and coordinated training — all essential for readiness, rapid response, and post-crisis recovery.

Applying this philosophy to civil protection and disaster risk governance introduces an innovative model in which civil and security dimensions converge into a shared resilience ecosystem. This approach aligns with the logic of civil-military cooperation, reinforced after the COVID-19 pandemic and the war in Ukraine, where dual-use capabilities, military logistics, and inter-agency communication systems play a growing role in civilian emergency response.

Moreover, building shared crisis-management structures reinforces Euro-Atlantic integration by fostering trust, institutional credibility, and operational interoperability. Practical cooperation during crises has created depoliticized channels of coordination that can contribute to reducing tensions and strengthening long-term regional cooperation.

Against this backdrop, this study examines the role of cross-border cooperation in disaster management in the Western Balkans and proposes a Regional Civil Smart Defense Model for civil security — one that transcends political constraints through integrated, results-oriented operational architecture. The introduction is followed by a theoretical framework addressing risk governance, post-conflict cooperation, and the Europeanization of civil security, forming the analytical foundation for empirical case analysis and strategic policy recommendations.

Guided by the structural challenges and regional dynamics outlined above, the study seeks to identify whether cross-border cooperation has strengthened shared disaster-response capacities and whether a regional Civil Smart Defense model is viable. The central research question is: *To what extent cross-border cooperation has enhanced collective disaster-risk management capacities in the Western Balkans, and can a regional Civil Smart Defense model be developed for civil security?*

The hypothesis is that *cross-border cooperation has produced gradual progress and concrete success cases; however, the lack of standardized procedures, asymmetry of capacities, and political constraints continue to hinder the establishment of a full-fledged regional model — although such a model remains achievable through progressive institutionalization and deeper Euro-Atlantic integration.*

2. Theoretical Framework

The development of a regional Smart Defense model for disaster risk management in the Western Balkans rests on the intersection of three analytical paradigms: (i) risk governance and resilience theory, (ii) cross-border cooperation and post-conflict regional dynamics, and (iii) Europeanisation and multi-level integration frameworks. These perspectives conceptualize disasters not merely as natural events, but as complex governance and security challenges requiring coordinated institutional responses, shared capacities, and collective resilience.

Risk Governance and Resilience. Risk governance in international literature refers to the institutional capacity to identify, prevent, and manage risks through integrated systems and coordinated public structures (UNDRR, 2022). Boin et al. (2017) underlines that crisis management effectiveness depends not only on emergency intervention, but also on preserving public legitimacy, maintaining reliable communication, and fostering inter-institutional coordination. In parallel, Linkov and Trump (2019) define resilience as the ability to absorb shocks, adapt to disruption, and emerge stronger.

These dynamics are particularly salient in the Western Balkans, where crises frequently expose inherited institutional weaknesses, uneven technical capacities, and insufficiently harmonized emergency procedures. UNDRR (2022) estimates that the region has one of the highest disaster-loss-to-GDP ratios in Europe, with damages exceeding €25 billion over the past two decades. Regional scholars highlight resilience as a product

of gradual administrative professionalization and shared protocol building (Marinković, 2022), while Tanasescu (2021) notes that recent crises accelerated civil-protection reforms by pushing governments toward EU-aligned risk-assessment systems.

Recent developments indicate a shift from reactive to preventive and analytics-driven governance, supported by early-warning systems, geospatial monitoring, and digital emergency-management platforms. Yet, despite this progress, major gaps persist: World Bank (2023) data shows that only 35–40% of municipalities in the region maintain updated disaster-risk plans, and only a limited number employ advanced analytical systems. Modernization is underway but requires deeper investment, professional training, and harmonization with international standards.

Cross-Border Cooperation and Post-Conflict Dynamics. The Western Balkans remains influenced by the legacy of conflict, ethnic tensions, and initially low levels of institutional trust. In such environments, trust-building occurs incrementally, “not through declarations, but through cooperative practice and measurable outcomes” (Fagan & Sircar, 2021). Evidence from recent crises supports this logic: following Albania’s 2019 earthquake, Kosovo, North Macedonia, and Montenegro deployed search-and-rescue units within 24–48 hours, while over 30 international teams operated on the ground (NCPA, 2020). Similarly, the 2014 floods mobilized over 3,000 international responders in Serbia and Bosnia (Đorić & Antić, 2023; Subotić, 2018). Regional scholarship emphasizes that disaster cooperation functions as “functional diplomacy,” reducing political tensions through technical collaboration (Krasniqi, 2022; Petrović & Marković, 2022). Studies published in European security journals reinforce the argument that crises create windows of institutional opportunity, strengthening multi-actor governance and interoperability (Dimitrov, 2023; Ilie, 2022).

Europeanisation, Multi-Level Governance, and Smart Defense. Europeanisation is understood as the alignment of domestic policies with EU standards and institutional norms (Featherstone & Radaelli, 2019; Vachudova, 2019). In the domain of disaster risk management, this materializes through convergence with the EU Civil Protection Mechanism, participation in IPA III programs, deployment of Copernicus and RescEU assets, and involvement in NATO-EADRCC and Partnership for Peace training cycles (Mocanu, 2022; Popescu, 2023).

Keil & Stahl (2020) describe this phenomenon as “pre-accession functional integration,” whereby Western Balkan states adopt EU frameworks before full membership, enhancing operational readiness and interoperability. In this context, Smart Defense emerges as a core strategic principle rooted in NATO’s “pooling and sharing” logic — joint capability development, resource consolidation, standardization, shared training, and cooperative strategic investment.

Applied to civil security, this leads to a “civil-security Smart Defense” ecosystem in which emergency services, civil-protection agencies, and defense structures coordinate for shared resilience outcomes. UNDRR

(2022) and OECD (2022) emphasize that crisis governance is most effective where capacities are pooled and standardized. Still, regional empirical data shows an imbalance: participation in international exercises increased by approximately 25% after 2020, yet joint emergency investments account for less than 10% of regional security projects (EC, 2023).

Integrating the Three Dimensions. The intersection of risk-governance theory, post-conflict cooperation logic, and Smart Defense principles forms the conceptual foundation of this study. Risk governance highlights the transition from reaction to prevention and preparedness; cross-border cooperation reflects the evolution from ad hoc solidarity to institutionalized mechanisms; Smart Defense conveys the shift from fragmented national capacities toward shared capabilities and collective efficiency. A regional Smart Defense model could therefore reduce dependence on external intervention, strengthen operational autonomy, build political trust, and accelerate Euro-Atlantic integration.

This theoretical framework not only informs the empirical case studies but also establishes a strategic foundation for designing a scalable and institutionalized resilience architecture for the Western Balkans — enabling the transition from crisis-driven cooperation to a structured and sustainable regional security ecosystem.

3. Methodology

This research adopts a comprehensive methodological approach, combining comparative case study analysis with an in-depth review of strategic documents, official reports, international statistics, and academic literature positioned within three main theoretical traditions: risk-governance scholarship, European integration studies, and cross-border cooperation in post-conflict regions. This blended design enables the study not only to examine the technical dimension of disaster response, but also to understand institutional capacity, inter-state cooperation dynamics, and the political constraints shaping operational performance in the Western Balkans.

The case-study strategy follows the analytical framework proposed by Yin (2014), who argues that this method is particularly suitable when the researcher seeks to understand complex phenomena in their real-world context, especially where boundaries between the phenomenon and its environment are blurred. Accordingly, the study selects three representative crises: the 2014 regional floods, the 2019 Albania earthquake, and the 2021–2023 wildfire seasons across the Adriatic region. These cases were chosen due to their varied hazard profiles—hydrometeorological, seismic, and climate-driven—different levels of international mobilization, and differing degrees of cross-border coordination. This enables the identification of shared patterns and structural differences, providing a robust basis for evaluating existing mechanisms and the potential for a regional Smart Defense model.

Data sources include civil-protection authority reports from Albania, Kosovo, North Macedonia, Serbia, Bosnia and Herzegovina, and Montenegro, as well as documentation from the European Union, particularly from DG ECHO, IPA III programs, and RescEU initiatives. Complementary evidence was drawn from NATO's Euro-Atlantic Disaster Response Coordination Centre (EADRCC), UNDRR assessments, OECD risk-governance reports, and World Bank disaster-impact data. The triangulation of institutional reports, quantitative indicators, and scholarly research ensured balanced interpretation and avoided over-reliance on government-reported performance metrics.

The analytical framework examines three dimensions of preparedness and cross-border cooperation: institutional coordination, technical interoperability, and political trust. For each axis, the study evaluates planning and command structures, standardization of procedures and information sharing, and the degree of mutual operational support. This approach moves beyond normative policy review and prioritizes the practical performance of civil-protection systems, highlighting mismatches between legislative frameworks and functional implementation under crisis conditions.

A key component of the methodology involves assessing the role of EU and NATO mechanisms as catalysts for regional cooperation. This is essential given that collaboration in the Western Balkans is strongly influenced by the European integration process and the presence of international institutional actors. For instance, DG ECHO data indicates that the activation rate of the EU Civil Protection Mechanism by Western Balkan countries increased by approximately 40% after 2019, while participation in joint regional exercises reportedly tripled between 2020 and 2023 according to NATO-EADRCC figures. Integrating such statistics provides both empirical grounding and insight into evolving regional capacities.

The study also applies discourse analysis to official government narratives and strategic planning documents, evaluating whether political rhetoric around cooperation translates into concrete institutional practice. This includes examining municipal emergency plans, professional certification levels among firefighting and rescue teams, and the presence or absence of integrated digital crisis-management systems. By comparing stated commitments to operational behaviors, the methodology reveals the gap between paper-based preparedness and practical readiness.

One methodological limitation lies in the absence of harmonized data across all Western Balkan countries for several operational indicators. While international organizations provide estimates, some states do not publish detailed statistics on deployment times, cross-border resource mobilization, or local-level emergency capacities. To address this, the study utilized multiple verification sources and cross-referenced institutional reports with independent assessments and academic research, ensuring analytical coherence and avoiding inflation of institutional capacity claims.

Additionally, the methodology includes a normative component assessing the feasibility of applying Smart

Defense principles in civil-protection systems. Unlike traditional security models that concentrate on national capacities, this study tests whether a regional environment supports shared capability pools, joint aerial firefighting fleets, standardized training pipelines, and interoperable digital systems. In this sense, the research design is both analytical and formative, mapping current capacities while outlining pathways toward institutionalized regional resilience.

In conclusion, the methodological approach offers a rigorous analytical foundation to evaluate the current state of regional disaster-risk cooperation in the Western Balkans and to critically test the applicability of Smart Defense logic to civil-protection structures. Through the triangulation of empirical data, scholarly literature, and institutional reporting, the study seeks to inform strategic policy design and to support the development of shared capabilities that enhance collective security and accelerate functional integration toward a resilient regional civil-security architecture.

4. Case studies analysis

This study examines how cross-border cooperation in the Western Balkans has evolved toward a more integrated approach to disaster risk management. Three major crisis events were selected as representative cases: the 2014 floods affecting Serbia, Bosnia-Herzegovina, and Croatia; the 2019 earthquake in Albania, which triggered immediate support from Kosovo, North Macedonia, and Montenegro; and the widespread wildfires between 2021–2023 across Albania, Montenegro, Croatia, and Greece. These crises provide concrete evidence of regional interaction, revealing both emerging capacities and persistent structural gaps.

Cross-border assistance during these events demonstrated the region's potential for practical solidarity, often overcoming political sensitivities and historical divisions. At the same time, uneven institutional capacities, limited interoperability, and the absence of harmonized early warning and operational systems continue to constrain the effectiveness of joint responses. Together, these cases form the empirical foundation for advancing a regional resilience framework and operationalizing the Civil Smart Defense concept in the field of civil protection.

4.1. The 2014 Floods: A Turning Point for Regional Risk Awareness

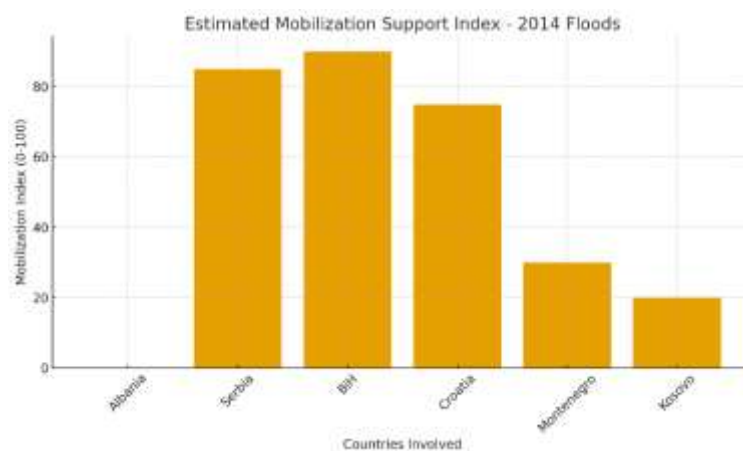
The catastrophic floods of 2014 represent a pivotal moment in regional awareness regarding the importance of cross-border cooperation in the Western Balkans. Extreme rainfall and rapid swelling of the Sava and Drina rivers resulted in unprecedented devastation, affecting over two million people and causing approximately 80 fatalities, with economic losses estimated at nearly €3 billion (UN OCHA, 2015; World Bank, 2015). The event exposed the limits of national emergency capacities and tested institutional ability to manage mass evacuations, widespread infrastructure damage, and emerging public-health risks.

In Serbia, the military and emergency services mobilized rapidly, yet response structures faced equipment shortages and gaps in centralized coordination (Government of Serbia, 2014). Bosnia and Herzegovina, characterized by a highly fragmented administrative system, experienced significant delays in resource distribution and inter-agency communication, illustrating the governance challenges of decentralized crisis management (OSCE, 2015). Croatia—then an advanced EU candidate—demonstrated comparatively stronger technical and logistical capacity but still relied heavily on cross-border support and activation of EU civil-protection mechanisms (DG-ECHO, 2016).

International mobilization was a defining feature. More than 3,000 international responders, including EU and NATO teams, were deployed (European Commission, 2016). Early-warning systems proved insufficient, while the absence of harmonized communication protocols hindered early evacuation planning (UNDRR, 2022). These weaknesses accelerated EU efforts to strengthen regional resilience and highlighted the strategic need for shared capacities (EC, 2017; NATO-EADRCC, 2015).

Cross-border support blended community solidarity with structured international intervention. Serbia, for instance, received specialized engineering assistance for dam and riverbank stabilization (World Bank, 2015). Local civic mobilization was also crucial, reflecting strong social capital in emergency response (Đorić & Antić, 2023).

Despite this, critical weaknesses persisted, including outdated hydrological modelling, weak spatial planning enforcement near waterways, and the absence of a joint flood-information and risk-monitoring system (OECD, 2022). Thus, the 2014 floods catalyzed a strategic shift toward institutionalized regional crisis cooperation, marking the Western Balkans' entry into a shared-resilience logic aligned with the “pool-and-share” principle (Keil & Stahl, 2020).



As illustrated in **Figure 1**, the level of cross-border support during the 2014 floods was highest among Serbia, Bosnia and Herzegovina, and Croatia, reflecting a coordinated emergency response and strong engagement

through the EU Civil Protection Mechanism. In contrast, Albania and Kosovo played a more limited role in the early intervention phase, largely due to comparatively lower institutional and operational capacities at that time.

4.2. The 2019 Albania Earthquake: Regional Solidarity and Multilateral Crisis Management

The 6.4 magnitude earthquake that struck Albania on 26 November 2019 was the most severe seismic event in the country since 1979, and among the strongest recorded in the Western Balkans in recent decades. The disaster resulted in 51 fatalities, over 900 injuries, and left nearly 17,000 people homeless, while economic losses exceeded €985 million (Government of Albania, 2020; World Bank, 2020). The earthquake tested Albania's emergency response system as well as regional and international solidarity mechanisms.

Domestically, the National Civil Protection Agency and the Armed Forces mobilized immediately, yet the early response revealed shortages in heavy USAR (Urban Search and Rescue) equipment, limited logistical capacity, and non-standardized information-sharing protocols (NCPA, 2020; AASF, 2021). Firefighting units and police forces deployed rapidly, though gaps in advanced training and rescue capabilities became apparent within the first hours.

A defining feature of this crisis was the rapid mobilization of neighbouring states. Kosovo, North Macedonia, and Montenegro deployed specialized search-and-rescue teams within 24–48 hours, signaling a high level of regional solidarity and operational readiness (Krasniqi, 2022; Petrović & Marković, 2022). Italy, Greece, and Turkey provided advanced USAR units, while the EU Civil Protection Mechanism coordinated the arrival of more than 30 international teams (DG-ECHO, 2020; European Commission, 2021). NATO structures also facilitated logistical support and situational-awareness exchange (NATO-EADRCC, 2020). Albania became a practical laboratory of integrated civil-military and multilateral crisis cooperation. Previous EU and NATO exercises contributed to tactical interoperability, although procedural and communication challenges remained visible (Ilie, 2022; Dimitrov, 2023). The donor coordination platform and EU-supervised reconstruction process established a precedent for multi-stakeholder recovery planning, combining state budgets, solidarity funds, and international assistance in a unified operational framework (EC, 2021; UNDP, 2021). An important dimension of this case was the mobilization of dual-use capacities. The Albanian Armed Forces and regional partners played a crucial role in logistics, demonstrating the effectiveness of a Smart Defense approach in civil emergencies (MoD Albania, 2021; Vokshi, 2022). Digital damage-assessment systems supported by the EU and World Bank enabled data-driven decision-making, setting a valuable standard for crisis analytics in the region (World Bank, 2021).

Nevertheless, the earthquake exposed persistent gaps in domestic capacity, the need for unified oper-

ational standards, and the urgency of modern seismic-monitoring and early-warning systems. It also underscored that in the absence of fully developed national capabilities, regional and international networks remain essential, strengthening the case for a structured Civil Smart Defense framework for disaster-risk management in the Western Balkans.

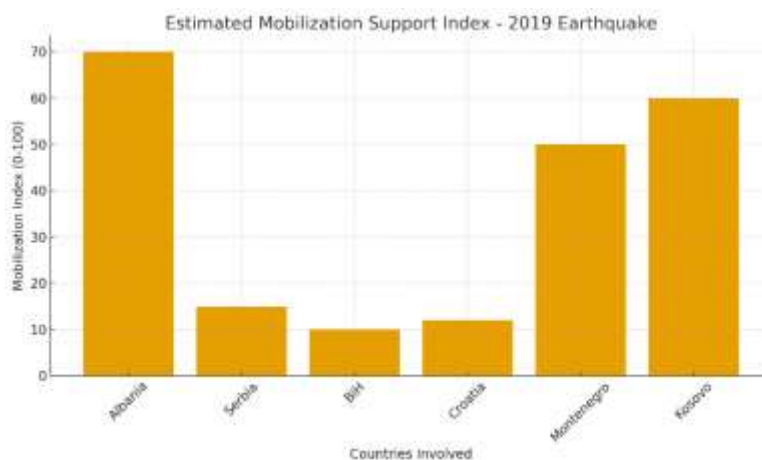


Fig.2. Source: Author's elaboration based on NCPA (2020), DG-ECHO (2020), World Bank (2021), and national civil-protection reports. As illustrated in Figure 2, the trajectory of immediate assistance to Albania following the 2019 earthquake demonstrates a significant rise in regional solidarity, particularly from Kosovo and Montenegro, highlighting strengthened operational capacities and improved cross-border coordination mechanisms (NCPA, 2020; Krasniqi, 2022; DG-ECHO, 2020).

4.3. Adriatic Wildfires (2021–2023): Air Capabilities and Climate Resilience Challenges

The wildfire seasons of 2021–2023 marked a new phase of climate-stress exposure in the Western Balkans and the Adriatic basin, affecting Croatia, Albania, Montenegro, Bosnia and Herzegovina, and Greece. Extreme temperatures, prolonged droughts, and strong winds created ideal conditions for rapid fire propagation, while uncontrolled forest terrain and limited aerial firefighting capacity intensified the scale and cost of the crisis (EFFIS, 2022; UNDRR, 2023).

In Albania, the 2021 season recorded over 1,000 active fire hotspots, including in protected natural areas such as Karaburun and Llogara (NCPA, 2022). Montenegro experienced similar pressure around Ulcinj and the Prokletije/Bjeshkët e Nemuna massif, while Croatia—traditionally the most capable in the region—mobilised its Canadair fleet yet still requested support from European partners (MUP Croatia, 2022; Đorić & Antić, 2023). According to EFFIS data, 2021 ranks among the worst years for burned land in the Adriatic corridor, with thousands of hectares affected.

This episode placed aerial capacity at the center of regional climate-emergency defence. For years,

Western Balkan states have relied on Croatia's Canadair fleet, as well as Italian and Greek assets, alongside RescEU support mechanisms (DG-ECHO, 2022). In multiple high-risk episodes, aircraft from Italy and Greece intervened in Albania and Montenegro, demonstrating operational "pooling and sharing" of assets and the importance of coordinated cross-border deployment (Krasniqi, 2022; Popescu, 2023).

However, reliance on external fleets exposed critical vulnerabilities. Response often faced delays due to simultaneous multi-country demands, aircraft availability constraints, and intergovernmental coordination requirements. The absence of domestically owned aerial firefighting fleets, combined with delayed modernization and fragmented logistics systems, confirmed that the region cannot indefinitely depend on external support for climate-driven emergencies (OECD, 2022; Vokshi, 2022).

On a positive note, field cooperation and joint training increased significantly after 2021. Regional civil-protection agencies reported more than 20 joint exercises and multiple new certifications for emergency responders during 2021–2023 (NCPA, 2023; MoD Albania, 2022). Furthermore, the Copernicus satellite system was widely used for real-time fire surveillance and early-warning, highlighting technology's expanding role in climate-risk management. Overall, the Adriatic wildfire crises demonstrated that climate shocks require a shift from ad-hoc response to sustained regional capability-building, investment in digital platforms, shared aerial resources, and advanced monitoring infrastructure.

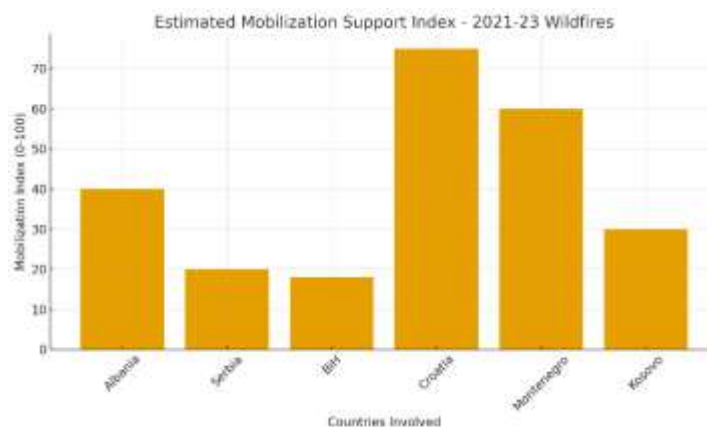


Figure 3. Cross-border aerial support and wildfire response missions in the Adriatic region (2021–2023). *Source: Author's elaboration based on data from EFFIS (2022), European Commission (2023), NATO-EADRCC (2023), NCPA (2022; 2023), and national civil-protection reports (Croatia, Montenegro, Albania).*

As illustrated in **Figure 3**, Croatia and Montenegro expanded their role in wildfire-response missions between 2021–2023, particularly through aerial support and cross-border assistance, reflecting advances in technological readiness and alignment with NATO/EU rescue coordination structures (European Commission, 2023; NATO-EADRCC, 2023).

4.4. Comparative Reflection and Lessons for a Regional Smart Defense Model

The three analyzed cases — the 2014 floods, the 2019 Albania earthquake, and the 2021–2023 Adriatic wildfire seasons — reveal a significant evolution in regional security culture: solidarity exists and emerges strongly in practice, yet it remains insufficiently embedded in a formal institutional architecture. Cross-border support was decisive in all cases, confirming Boin et al.’s (2017) argument that effective crisis management depends not only on emergency response but also on institutional coordination capacity. However, cooperation largely manifested as spontaneous reaction, driven by situational political will rather than harmonized protocols or a stable regional mechanism (UNDRR 2022; OECD 2022). Persistent asymmetries in equipment, aerial firefighting resources, and technical expertise — alongside the absence of a joint fleet and limited early-warning and information-sharing systems — highlight the lack of a formalized “pooling and sharing” model consistent with the frameworks proposed by Linkov & Trump (2019) and Keil & Stahl (2020).

At the same time, these emergencies demonstrated that crisis response has functioned as a bridge for cooperation transcending political divides and historical tensions. This supports the observations of Fagan & Sircar (2021) and Petrović & Marković (2022) that crises can generate new collaboration spaces independent of political climate. In several cases, mutual assistance produced “de facto technical diplomacy”, fostering practical trust where formal dialogue remains fragile (NATO 2023; NCPA 2023).

The lessons are clear and provide a solid foundation for advancing a regional Smart Defense model in disaster risk management. Demonstrated solidarity indicates strong potential for structural consolidation, while emerging technological capabilities — including satellite systems like Copernicus and AI-enabled risk assessment — create new opportunities for prevention and coordinated response (European Commission 2023; UNDP 2023). Additionally, the critical contribution of armed forces in emergency support reinforces the dual-use logic and the need for civil-military interoperability, aligning with Subotić’s (2020) argument that institutional modernization requires multi-level synergies. Progressive alignment with EU and NATO mechanisms ensures standardization and professionalization, reflecting what Europeanisation literature describes as the “internalization of practices” through functional cooperation (Featherstone & Radaelli 2019; Stoica 2022). Overall, the comparative reflection highlights that multilateral cooperation has not only been instrumental to operational effectiveness but has also generated political and social capital, strengthening the foundations for an integrated civil-security ecosystem and resilience architecture in the spirit of Smart Defense.

5. Discussion

The case study analysis demonstrates that the Western Balkans is transitioning from a crisis-management paradigm characterized by reactive, ad-hoc responses toward a more structured, interdependent, and institutionalized model of risk governance. However, this transition remains uneven and nonlinear; it is frequently disrupted by unequal institutional capacities, political tensions, lack of technical standardization, and reliance on external assistance — primarily from the EU and NATO. This hybrid trajectory aligns with Boin et al. (2017), who argue that institutional resilience depends not solely on technical capabilities but also on public trust, inter-actor cooperation, and organizational cultures of long-term planning.

Resilience as a process rather than a static capacity. International literature emphasizes that resilience is measured not only by response capacity, but also by recovery and transformation processes (Linkov & Trump, 2019). Evidence from Albania after the 2019 earthquake and from Serbia and Bosnia and Herzegovina after the 2014 floods shows that multilateral recovery efforts coordinated with European partners and international financial institutions created conditions for structural reforms — including new construction standards, protection agencies, and formalized regional partnerships (World Bank, 2021; EC, 2023). Yet regional studies indicate that such reforms often remain partially formal, with limited implementation due to politicization, lack of professional staff, and fiscal constraints (Krasniqi, 2022; Marinković, 2022). This reflects Subotić's (2020) argument that Europeanisation in the region often results in “superficial compliance,” where regulations are adopted but not fully operationalized.

Regional coordination: real solidarity without a shared architecture. The analyzed events reveal genuine operational solidarity across neighbouring states — visible in rapid support and deployment during major crises. This confirms Petrović & Marković's (2022) observation that civil security functions as a domain of functional diplomacy capable of transcending bilateral disputes. It also aligns with Fagan & Sircar (2021), who emphasise the value of “minimal functional trust” in fragile post-conflict regions.

However, the absence of a formalized regional mechanism constrains this potential. OECD (2022) and UNDRR (2022) note that while Southeast European states have improved domestic emergency systems, interoperability remains partial and inconsistent. Establishing a joint crisis coordination center, shared aerial firefighting fleet, and standardized response protocols therefore appears as a strategic necessity, not an optional cooperative preference.

Technology, digitalization, and AI in emergency governance. A transformative dimension of modern risk governance lies in digital systems, big data, artificial intelligence, and satellite monitoring. Platforms such as Copernicus, EFFIS, and the EU Emergency Response Coordination Centre (ERCC) have been essential for situational awareness and decision-making. Yet recent research shows that technological adoption in the region is uneven, shaped by investment levels, digital infrastructure, and staff capacities (Ilie, 2022; Dragoescu

& Gherghina, 2023). Without parallel institutional reforms, such technologies risk creating “artificial resilience,” where systems appear modern but remain fragile in practice. Therefore, integrating AI-based early-warning systems, regional climate-risk research, and specialized training for emergency personnel is essential to ensure that digital transformation translates into operational resilience.

Political context and trust-building. The Western Balkans remains influenced by political instability, interstate mistrust, and geopolitical competition involving Russia, China, and Turkey (Bechev, 2019; Dimitrov, 2023). This makes emergency management a sensitive arena in which technical cooperation and depoliticization are essential. Success cases like Albania’s 2019 earthquake response demonstrate that trust can grow significantly when outcomes are visible and measurable on the ground. However, persistent tensions, such as those between Kosovo and Serbia, create a complex environment where technical cooperation must continually balance diplomatic constraints and competing strategic interests. As Keil & Stahl (2020) note, “functional integration” in the Balkans often occurs independently of political integration, yet still advances institutional strengthening and governance modernization.

Toward a regional Smart Defense model for civil security. The applicability of Smart Defense principles to civil protection receives both theoretical and empirical support in this study. Smart Defense — grounded in shared capabilities, standardization, and coordinated resources — aligns with Perkmann’s (2003) conceptualization of cross-border cooperation as a mechanism for institutionalization and efficiency. It is also consistent with EU practices, where shared fleets, joint emergency hubs, and integrated data platforms have produced higher operational performance and reduced long-term costs. In this context, a Western Balkans Smart Defense model is not simply an academic proposal, but a strategic necessity — a pragmatic tool to reduce risks, share costs, and accelerate Euro-Atlantic integration (Kovačević & Đurović, 2021; Risteska & Zoran, 2020).

The COVID-19 pandemic and the Ukraine crisis renewed EU emphasis on “strategic preparedness and resilience,” reinforcing the centrality of shared capacities (EC, 2023; UNDRR, 2022). This situates the Western Balkans at a pivotal moment: the region can build a joint civil-security architecture that not only addresses natural hazards but also serves as a stabilization instrument, enhancing institutional legitimacy and political modernization. By operationalizing Smart Defense in the civil domain, the Western Balkans could transition from episodic crisis solidarity toward a sustainable resilience system — where interoperability, shared resources, and trust become embedded pillars of regional security governance.

7. Recommendations and Conclusion: Toward a Smart Regional Defense Model for Disaster Management

Building a sustainable regional model for disaster risk management in the Western Balkans requires

a shift from reactive solidarity toward institutionalized and integrated capabilities. To date, regional cooperation has largely emerged in response to major crises, driven by goodwill and ad-hoc solidarity rather than embedded operational structures (Boin et al., 2017; UNDRR, 2022). This aligns with risk governance scholarship emphasising that resilience must rely on durable systems rather than episodic intervention capacity (Linkov & Trump, 2019).

The proposed concept of Civil Smart Defense adapts the Euro-Atlantic principle of *pooling and sharing* to the civil-protection domain, combining national strengths to create shared capacity (Keil & Stahl, 2020). This approach rests on three fundamental pillars:

1. Shared operational assets,
2. Integrated training and certification pipelines, and
3. Interoperable digital and early-warning infrastructure.

Such a framework would reduce operational costs, strengthen technical interoperability, and reinforce trust both institutionally and politically (Fagan & Sircar, 2021; Petrović & Marković, 2022).

Institutional Architecture. A core recommendation is the establishment of a Regional Crisis Management Coordination Centre, functioning as a hub for multi-state emergency planning, intelligence exchange, and joint operational command — reflecting coordination models seen in EU and NATO systems (European Commission, 2023; NATO, 2023). *Shared Aviation and Logistics Capacity.* The creation of a regional aerial-fire-fighting and emergency aviation fleet represents another strategic priority. Every major disaster in the past decade — floods, wildfires, earthquakes — exposed the region’s reliance on external aviation assets. Shared aircraft and logistics bases would improve response times and reduce structural dependence on external partners.

Regional training and professionalization. A Regional Academy for Civil Protection and Emergency Response should be established to harmonize training standards, conduct joint exercises, and develop interoperable doctrines and certification pathways (Marinković, 2022). Joint learning experiences would accelerate the alignment of local professionals with European operational standards, strengthening civilian-military coordination and enhancing institutional culture.

Digital Integration and Intelligence Systems. In line with evolving EU resilience frameworks, the model calls for a regional early-warning and risk-analysis platform, leveraging AI-enabled prediction tools, satellite imagery (Copernicus), and geospatial systems to achieve unified situational awareness and synchronized response (UNDP, 2023; OECD, 2022). This would also support *data-ready governance*, enabling predictive decision-making and coordinated crisis communication.

Overall, the Western Balkans has demonstrated significant *crisis solidarity* but lacks a systemic architecture to transform episodic cooperation into structured resilience. The Civil Smart Defense model offers

a pragmatic, scalable pathway to operational coherence, cost-effectiveness, and shared preparedness. More importantly, it positions disaster-risk cooperation not only as a humanitarian imperative but as a strategic instrument of regional stability and Euro-Atlantic convergence. Strengthening shared capabilities would decrease dependence on external assistance, build political trust, and foster an integrated security ecosystem capable of facing accelerating climate and seismic threats.

In a region where security and political dynamics remain sensitive, civil-protection cooperation provides a uniquely depoliticized entry point for sustainable trust-building and strategic transformation. The Western Balkans now stands at a decisive inflection point: by institutionalizing Civil Smart Defense, it can transition from reactive mutual aid to a proactive, networked, and future-ready resilience architecture — advancing both human security and long-term regional integration.

Below is the conceptual diagram for the proposed “Civil Smart Defense” Model for the Western Balkans. It visually links three strategic pillars (shared assets, shared training, shared digital systems) to a Regional Crisis Hub, which then leads to Integrated Response & Resilience.

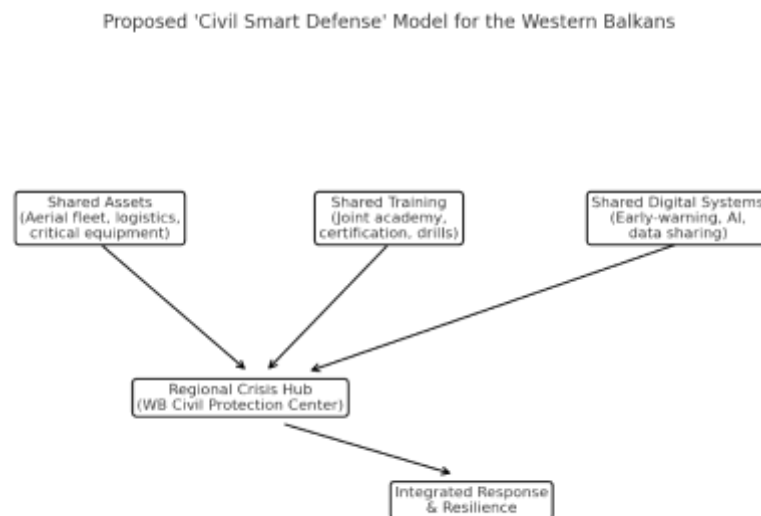


Figure 4. Proposed “Civil Smart Defense” Model for the Western Balkans

This structure not only enhances response capacity but also generates political stabilization effects by creating technical cooperation channels even during periods of tension or absence of formal dialogue between governments (Subotić 2020; Stoica 2022). Such functional diplomacy aligns with the logic of gradual, bottom-up integration, particularly effective in post-conflict regions (Bechev 2019; Fagan & Sircar 2021).

To ensure the practical implementation of this model, key recommendations include deeper participation in

EU and NATO civil-protection mechanisms, the establishment of a joint early-warning and situational-awareness hub, development of shared procurement and maintenance procedures, standardization of civil-military interoperability doctrine, and active involvement of local communities in preparedness and response systems. These measures are essential to shift cooperation from episodic solidarity to systemic resilience, turning the Western Balkans into a region that is both secure and functionally integrated with the European civil-security architecture.

8. Executive Summary

The evolution of disaster risk management in the Western Balkans demonstrates that natural hazards serve as a complex stress test for state capacities, political cohesion, and the ability to operate in a coordinated manner. The 2014 floods in Serbia, Bosnia and Herzegovina, and Croatia, the devastating 2019 earthquake in Albania, and the wildfire seasons of 2021–2023 across Albania, Montenegro, Croatia, and Greece revealed that disasters transcend administrative boundaries and challenge the region's security architecture. Immediate cross-border assistance—often surpassing political constraints and historical tensions—highlighted a tangible potential for practical solidarity. However, limited operational standardization, fragmented protocols, and the absence of permanent shared-resource mechanisms continue to constrain collective effectiveness.

Within this context, the concept of Smart Defense, adapted from NATO doctrine, offers a robust framework for shifting from ad-hoc emergency cooperation to institutionalized regional resilience. The philosophy of pooling and sharing, joint investments, dual-use capabilities, and shared technological and human resources provides a pragmatic path toward enhanced autonomy, cohesion, and operational readiness. Growing participation in EU and NATO civil-protection mechanisms, the expanded use of advanced systems such as Copernicus and RescEU, and increased participation in multinational training exercises already signal a positive trajectory toward functional integration.

The findings suggest that the Western Balkans can serve as a strategic laboratory for emerging EU–NATO cooperation in civil security. If existing solidarity is formalized, advanced technologies integrated, and shared standards systematically adopted, the region can evolve into a sustainable resilience platform—contributing not only to regional security, but also to the broader Euro-Atlantic security architecture.

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