BOOK OF PROCEEDINGS

INTERNATIONAL CONFERENCE
13th - 14th October 2023

ISSUES OF HOUSING, PLANNING, AND RESILIENT DEVELOPMENT OF THE TERRITORY

Towards Euro-Mediterranean Perspectives

ISBN (print) 9789928352286
ISBN (e) 978-9928-352-29-3
DOI 10.37199/c41000100

Issues of Housing, Planning, and Resilient Development of the Territory Towards Euro-Mediterranean Perspectives

Conference Theme and Rationale

Albania, along with other Western Balkan countries, has undergone significant economic, social, and political changes in recent years. As a result, housing, planning, and the resilient management of territorial development have emerged as critical issues. This is because these regions face significant challenges in providing affordable housing, addressing the impact of urbanization on the environment, fostering evidence-based decision-making on the territory, and bringing forth the commitments towards climate neutrality.

The organizers use the term "multi-modality" to define complex situations (in matters of territorial planning, management, architecture, housing, public space, technology, etc.) that have historically encompassed Western Balkans and Mediterranean cities in a logic of coexistence and value co-creation. A combination of knowledge and heritage that throughout time and history have given life to civilization in this region of Europe. The active involvement of Albania in the existing network of the Mediterranean Basin and the EU, through a joint action plan with UN / UNECE, and the Albanian and regional authorities, including reputable scientific bodies such as the Academy of Sciences of Albania, makes this conference even more intriguing to explore fascinating areas of research. The conclusions, to be considered as a stage for open innovation, will include recommendations for further scientific and applied research, projects, and events.

The geographical focus of the conference covers three dimensions: i) Albania; ii) the Western Balkans; iii) Euro-Mediterranean countries. POLIS University aims to focus on the above-mentioned research areas that are of common interest to both Western Balkans and Mediterranean cities, including, but not limited to: housing policies, urban history and architecture typology, innovation and digitalization in urbanism, energy efficiency, resilience and environmental sustainability, governance and smart technologies for city management, education and gender aspects in urban planning research.

In this regard the main aim of this international conference is to bring together scholars, policymakers, and practitioners to examine the pressing issues of housing, planning, and land development in these regions, in a context of transition fatigue, climate challenges and post-pandemic realities.

Issues of Housing, Planning, and Resilient Development of the Territory Towards Euro-Mediterranean Perspectives

Conference Aim

The main aim of this international conference is to bring together researchers, policy makers and practitioners to examine the urgent issues of housing, planning and land development in these regions, in a context of transition, climate challenges and post-pandemic realities.

Objective

-Consolidation of the cooperation network between Albanian and non-Albanian researchers, lecturers, managers, with the aim of participating in joint research projects at the regional and international level;
-Support of local authorities with contemporary data, on the state of housing issues, planning and sustainable urban and environmental management, as well as representatives of public and private institutions operating in this field.

The conference is organized by POLIS University (U_POLIS) in cooperation with the Academy of Science of Albania, and supported by other local and international partners.
In the framework of resilience, the main conference theme is devoted to Issues of Housing, Planning, and Resilient Development of the Territory from a Euro-Mediterranean Perspective, including Albania, Western Balkans and the Mediterranean Basin. This event aims to bring together academics, policymakers, researchers, experts, practitioners, and stakeholders from diverse backgrounds to discuss and address critical challenges related to housing, urban planning, and the development of resilient territories.

Scientific Committee

Prof. dr. Sherif Lushaj;
Polis University

Prof. dr. Besnik Aliaj;
Rector of Polis University,

Prof. dr. Tamara Luarasi;
Polis University

Prof. dr. Gjergj Ikonomi;
Polis University

Akad. Adrian Civici;
Academy of Sciences

prof. dr. Neritan Shkodrani;
Polytechnic University of Tirana

Prof. dr. Perikli Qiriazi.
Academy of Sciences

Organizing Committee

Prof. assoc. dr. Xhimi Hysa;
Polis University

Dr. Sotir Dhamo;
Polis University

Dr. Elona Karafili;
Polis University

Sadmira Malaj;
Polis University

Akad. Kosta Barjaba;
Academy of Sciences

Akad. asoc. Gëzim Hoxha;
Academy of Sciences

Akad. Jorgaq Kaçani;
Academy of Sciences

Akad. Neki Frashëri.
Academy of Sciences

Table of Content

Planning for disaster risk management: the perspective of Greece and Albania on envisioning resilient futures

Ph.D. Candidate. Varsami (Ersi) ZAFEIRIOU[1]
Prof. Dr. Besnik ALIAJ[2] Prof. Dr. Pantoleon SKAYANNIS[3]
[1]*Leibniz Institute for Ecological Urban and Regional Planning (IOER)*
[2]*POLIS University, Albania*
[3]*Professor, POLIS, Emeritus Professor, UTH*

DOI: 10.37199/c41000122

Abstract

Climate change has (according to many) intensified natural hazards, and exacerbated natural disasters and their human and economic consequences. International organizations (United Nations Office for Disaster Risk Reduction- UNDRR, Intergovernmental Panel on Climate Change – IPCC, etc.) have established frameworks for disaster prevention, mitigation, reaction, and recovery. At the same time, the Sustainable Development Agenda 2030 recognizes the need for Disaster Risk Reduction for sustainable transformation, with cities being the focal point for achieving safety, inclusiveness, resilience and sustainability on a global level (United Nations, 2015, p. 24). Governments, planners, and academics have also been concerned about the issue of resilience and especially in cities for which there have been projects, such as the exemplary one for the 100 Resilient Cities (2022). Nonetheless, the complex interrelationships between resilient and sustainability goals raise the question of whether the two are complementary or contrasting qualities for planning agendas (Ahern, 2011; Saunders & Becker, 2015; Grum & Grum, 2023). Scientific knowledge on disaster risk management and supporting policy discourse are therefore growing, however, losses from natural disasters worldwide increase (CRED, 2022). Different policies are implemented by different governments, but in most cases, they have a common element, an ex-post approach, since they focus on the restoration of disaster damages and rarely include planning for the future (Skayannis & Zafeiriou, 2021). This paper attempts to see the phenomenon from the perspective of two countries (Albania & Greece), to discuss the basic policies for risk management and planning applied in the cases of disasters (except earthquakes), of the two countries and to find the pros and cons of the policies applied, based on a set of criteria.
These criteria are focused on:
•The institutional capacities for socio-ecological and spatial resilience planning in the two countries.
•The level of knowledge (including the transfer of both scientific and indigenous/local knowledge transfer) of stakeholders on hazards, exposure and disaster risk.
•The spatial planning practices for sustainable development and management of uncertainties for disaster risk prevention, and mitigation of future impacts.
The ultimate aim of this paper will be to outline:
•how do the two neighbouring countries shape their disaster risk management visions (where is the focus? on sustainability or resilience? links between them?) • the role of spatial planning in the process of "fabricating" the visions (based on the former criteria).
Keywords: Disaster Risk; Resilience Planning; Sustainability Policies; Greece; Albania

Introduction

Climate change has intensified natural hazards and exacerbated natural disasters and their human and economic consequences. While not all natural hazards are related to climate change and weather (e.g., earthquakes, volcano eruptions, tsunamis), it was the weather-related that revealed the misconceptions of the socio-technical risk approaches (IPCC, 2014, p. 53; IPCC, 2023) to disaster risk management. Climate-related disasters have accounted for 91 per cent of the recorded disaster events over the past 20 years (UNDRR, 2018). The hazards and the degree of vulnerability of a system or population exposed to the hazard, are the most critical factors for risk - the interaction between natural hazards, with exposed communities and systems, and their associated vulnerability, lead to a natural disaster (O'Keefe, et al., April 15 1976; Hewitt, 1983) or an increased disaster risk.

Disaster risk (DR) is the "likelihood over a specified time period of severe alterations in the normal functioning of a community or a society due to hazardous physical events interacting with vulnerable social conditions, leading to widespread adverse human, material, economic or environmental effects that require an immediate emergency response to satisfy critical human needs and that may require external support for recovery" while disaster risk management (DRM) is the "processes for designing, implementing and evaluating strategies, policies and measures to improve the understanding of current and future disaster risk, foster disaster risk reduction and transfer, and promote continuous improvement in disaster preparedness, prevention and protection, response and recovery practices, with the explicit purpose of increasing human security, well-being, quality of life and sustainable development (SD)"(IPCC, 2012,p:5).

International organizations (e.g., United Nations Office for Disaster Risk Reduction- UNDRR, Intergovernmental Panel on Climate Change – IPCC, etc.) have established frameworks for disaster management (prevention, preparedness, emergency reaction, and recovery). More holistic management of disaster risks was introduced by the Sendai Framework for Disaster Risk Reduction 2015–2030, with the proposed actions representing a shift from coping with disasters to an approach of a better understanding of disaster risks inherent to the decisions and actions within social, economic, political, and environmental systems across diverse geographies and spatial scales. Around the same time, the 2030 Agenda for Sustainable Development stresses how essential safety, inclusiveness and sustainability can be hindered by disaster risk (UN, 2015). Except for the policies, plenty of initiatives and networks conceptualized the integral role of resilience for cities (e.g. Rockefeller Foundation, 2019) and regions (RESILIENCE, 2022) as a pathway of coping, adapting and transforming spatial entities in the face of rapid shocks (natural disasters) and long-term stressors (climate change).

By engaging in spatial planning, the potential disaster risks posed by extreme events and the vulnerability of individuals and infrastructures (such as buildings and roads) to crises and disturbances, can be mitigated. Resilience has gained momentum in spatial planning research, policy, and practice due to the need for adapting to climate change and disaster management insights in complex adaptive systems- CASs (Batty,2013; Folke,2006). In the context of international policies and academic discourse, spatial planning as a cross-cutting field of intervention in spatial structures and development is, therefore, considered a critical parameter in both managing and reducing the disaster risks of a potential natural disaster (e.g., Alexander, 2000; UNISDR, 2015,

[1]Socio-technical risk assessments are those based on objective elements of risk, like the evaluation of statistical data to make predictions on potential hazards (Renn, 2008).

[2]Risk is defined as a simplified equation of hazard and vulnerability (as first proposed by Fournier d'Albe, (1985,p.77) for seismic risk and then adopted by UNISDR, 2004. The capacity was added later to the equation, and it sometimes is considered a component of vulnerability (IPCC, 2012).

At the same time, sustainability has gained popularity as disaster risks and natural disasters pose a great threat to the goals and strategies for sustainable development. Nonetheless, the complex interrelationships between resilience and sustainability goals raise the question of whether the two function complementarily or conflictingly in planning agendas (Ahern, 2011; Saunders & Becker, 2015; Grum & Grum, 2023).

The purpose of this paper is to research the novel approaches in planning for disaster risk management in Greece and Albania, their institutional capacities for resilience planning, the level of transferable knowledge on the core components of disaster risk management, and their potential in the context of resilience planning practices for sustainable development, in an era of growing uncertainty of today's decisions for the future. For the current practice on disaster risk management to be explored in this paper, four components are considered integral: policy (translated into laws and regulation), agencies and actors, data gathering, monitoring and evaluation, and participatory planning and communication of knowledge and information (Fig.1). In the first section, the strategic policy progress in DRM and its' integration and/or contribution to spatial planning is discussed. Subsequently, the agencies and actors' responsibilities, jurisdiction, and roles are identified; the extent of data availability, accessibility, and distribution is under question; the participation of different stakeholders and the quality of communicating knowledge and information are finally investigated. The second session discusses if, in current disaster risk management practices, resilience and/or sustainability initiatives can be implied, to outline what future visions are driven by spatial planning and policy for disaster risk management. To conclude, a discussion about common elements and differences in the approaches of the two countries is presented, with a focus on spatial planning's role in disaster risk management.

Disaster risk management and spatial planning: current practice in Greece and Albania

To conceptualize how current DRM practice in Greece and Albania is integrated into spatial planning, it is necessary to initially review the related policy evolvement in the two countries, the actors and agencies involved, the data acquisition, accessibility and assessment methods and tools, the participation in disaster risk management and the communication of information and knowledge. These are related to spatial planning since each element contributes to spatial structure change and spatial development (Fig.1).

Policies offer guidelines and instructions for incorporating DRM into spatial planning. These policies are formally expressed through laws and regulations, which establish clear responsibilities for all involved agencies and actors. The different agencies and actors in the processes of developing institutional arrangements and outlines of operational procedures in the field of DRM will be also identified. Seamless exchange and sharing of data, between the different relevant agencies is a crucial step in the potential integration of DRM in spatial planning since it leads to more informed decisions for spatial structures and spatial development. Furthermore, the integration of disaster risk management into spatial planning requires the active involvement of multiple government agencies and public engagement, and the creation of community networks for distributing knowledge or information. To facilitate this process and enable smooth data sharing and exchange, novel ways of participation and communication of knowledge can be employed, such as platforms and hands-on workshops.

Strategic policy

One of the Sendai Framework's seven targets was to substantially increase the number of countries with national and local disaster risk reduction (DRR) strategies by 2020, as a prerequisite

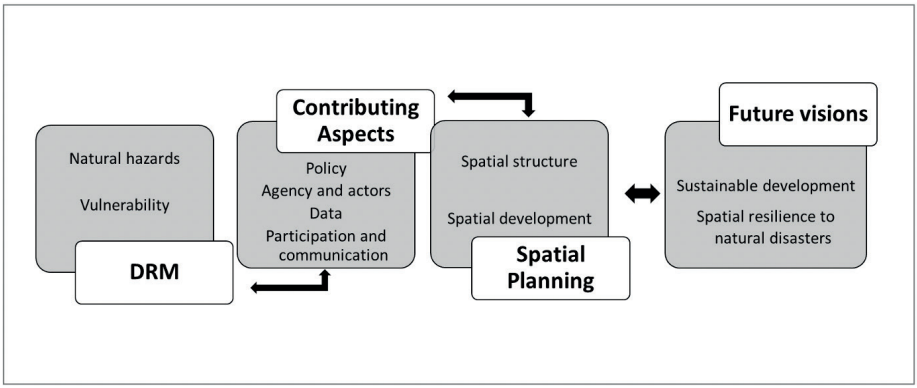

Figure 1: Conceptual analysis framework / Source: Authors

to achieving the Framework's other targets by 2030. By August 2020, 93 countries had a national DRR strategy, while 72 had local DRR strategies in place—a 111% and 85% increase, respectively, since 2015 (UNDRR, 2020). The number of countries with national DRR strategies (Target E) increased from 55 in 2015 to 125 in 2021. Greece and Albania both signed the Sendai Framework back in 2015. According to this guideline, Albania has recently developed its national strategy for DRR (2023), which will be followed by a National Civil Emergency Plan. For the time being, Greece lacks a strategy at a national level, but instead has a General Civil Protection Plan "Xenokratis" (Government Gazette 423B, 10.04.2003) since 2003, which only defines, however, the actions for emergency responses to a natural disaster, with a technocratic division of the roles and responsibilities of agencies involved in civil protection in the country.

Except for the national strategies, an additional need to create hazard-specific plans, since every hazard requires different measures and policies, and to denote the complementarity between these plans arises in the face of increasing impacts of natural disasters impacts. In Greece, "Xenokratis" plan has been the basis for the generation of a series of other Civil Protection Plans, based on the type of hazard, which follows the same purpose (giving directions and clarifying the actions to take place by each responsible agency). These plans (e.g., "Dardanos" Plan for Floods, "Iolaos" Plan for Fires, etc.) do not offer a thorough analysis of either the challenges or the preparedness measures in case of the hazards. In Albania, there have been studies and recommendations by research institutes or donor organizations that address specific hazards (e.g., flooding or wildfires), but there are not any hazard-specific plans at present, with the exception of the Municipality of Lezha, which has drafted vulnerability assessments, a DRR strategy, and a Civil Emergency Plan, as required by the Albanian legislation, and the qark of Shkodra as well, which has a flood management plan (Toto, 2020).

More localized DRR plans, in municipalities and/or regions (qarks for Albania), are equally necessary for the vision of achieving disaster resilience and sustainability. In Albania, all municipalities are legally obliged to draft vulnerability assessments, DRR strategies, and Civil Emergency Plans. Furthermore, risk assessment and risk reduction plans are obligatory at the national level and municipal level in Albania, covering all hazards, however, they are not yet implemented horizontally. In Greece, both municipalities and regions are legally obliged to have their civil protection plans, while the Directorate of Civil Protection reports directly to the Coordinator of the Decentralized Administration and is responsible in particular for the planning and organization in matters of

prevention, information and response to disasters or emergencies in accordance with the current legislation, as well as for the coordination of all the Services of the Decentralized Administration to ensure preparedness, disaster response and damage recovery. The Decentralized Administration agencies create two types of plans:

A. general plans for an emergency response to a disaster, and

B. a memorandum of emergency actions between the different administrative levels and public agencies.

The plans produced, use the legal basis and the same approach as the aforementioned (national) civil protection plans. The above legal basis offers the framework of responsibilities and roles in disaster management in the two countries. In Greece, it is a strictly technical approach of dividing the duties, while in Albania the recent steps and obligations (such as the inclusion of vulnerability assessment in DRR municipality strategies) show a more preparedness-oriented approach.

For both countries, only in the case of earthquakes and flooding can an intensive and systematic effort to create disaster risk management strategies be detected. To date, only the Municipality of Lezha has drafted all three policy documents required by the legislation and some "qarks" as well, like the flood management plan for Shkodra (Toto, 2020). The rest of the municipalities adopt a Civil Emergency Plan, without employing an appropriate methodology for disaster risk and vulnerability assessment. Greece has completed the Preliminary Flood Risk Assessment for each River Basin and the identification of Potentially Flooding Zones of High Flood Risk (December 2012), the preparation of Flood Risk Maps and Flood Risk Maps (March 2017) as well as the preparation of Flood Risk Management Plans (FMPs) for Potentially High Flood Risk Zones (July 2018), as it was a directive for EU-member states (Government Gazette 1108/B'/ 21-07-2010, 2010).

Due to their geotectonic position, the exposure of the two countries to seismic risk is high. Devastating earthquake occurrence with environmental and infrastructural damage and loss of life and property is a rather frequent phenomenon (i.e., Papazachos & Papazachos, 2003, Freddi et al., 2021). As this is the case, EPPO (Earthquake Planning and Protection Organization), the Greek state authority for planning and monitoring the implementation of the earthquake policy at all levels (Law. 1349/1983), has shifted its focus to a socio-ecological approach, by aiming to strengthen the resilience of the earthquake affected systems (communities, people, institutions, etc.) and be capable to cope and recover efficiently from the impact of a disastrous event, enhancing risk assessments by individualization of the policy and trying to build a seismic culture based on the bottom-up approach with a degree of flexibility, decentralized actions and public participation (Mavroulis et al., 2022). For other hazards, there is an essential gap in disaster risk strategy and policy, with the research being held in academic or other institutions having no substantial impact on policy for disaster management. Furthermore, strict seismic codes have been introduced in 1959 and revised, notably after major earthquake events, in 1985, 1995 and 2000. In Albania, the devastating effects of the earthquake of 26 November 2019, called for action and it was a high-impact cost (loss of lives, property, infrastructural damages, etc.) "window of opportunity" for a recovery plan (Venghaus, 2021). The Albanian government facilitated detailed local plans for the intensively impacted areas, through public-private partnerships to ensure housing for the affected population.

Agencies and Actors

The responsibility of disaster risk management is shared by different administrative government

[3]Vulnerability assessments, DRR strategies, Civil Emergency Plans

levels in the two countries, while non-government organizations and institutions are acting complementarily, with funding, research, data acquisition and assessments, consulting, initiatives, and roles. At this point, it is important to note that the structure and hierarchy of the policy-making and action mainstreaming for DRM, vary depending on the governmental system and spatial planning format adopted by each country. This is not an exhaustive review of the different agencies, but rather the basic agencies involved.

Greece has an arrangement of administrative governance levels, including municipal, regional, and national, and an additional intermediate level between regional and national, the Decentralized Administration for certain purposes. Albania follows a system consisting of municipal and national levels, with an intermediate administrative level called "qark". Nevertheless, central government laws and regulations play a crucial role as a comprehensive framework, offering directives for actions taken by local governments. Three stages are employed here for a clearer analysis of the responsibilities of administrative levels and the roles of other actors: the strategic, the operational, and the tactical (Fig.2).

In Greece, on the strategic level, the responsible governmental agency is the General Secretariat for Civil Protection (GSCP), a departmental division of the Ministry for Climate Crisis and Civil Protection (Government Gazette 161/A, 9.9.2021), to plan and coordinate actions regarding DRM, to accumulate the necessary information and data for disasters/ emergencies, to monitor the results and the impacts of the actions, and to communicate the knowledge acquired or to notify the public in case of an emergency. An additional agency functions at a national level- the Civil Protection Operations Center (CPOC) for the management of resources in emergencies (response to a natural hazard) and coordinates the army and the civil protection bodies that are included in the emergency-response stage (namely: the Armed Forces, the Hellenic Police, the Hellenic Fire Service and the Hellenic Coastal Guard)(Gountromichou et al., 2014). Municipalities and regions

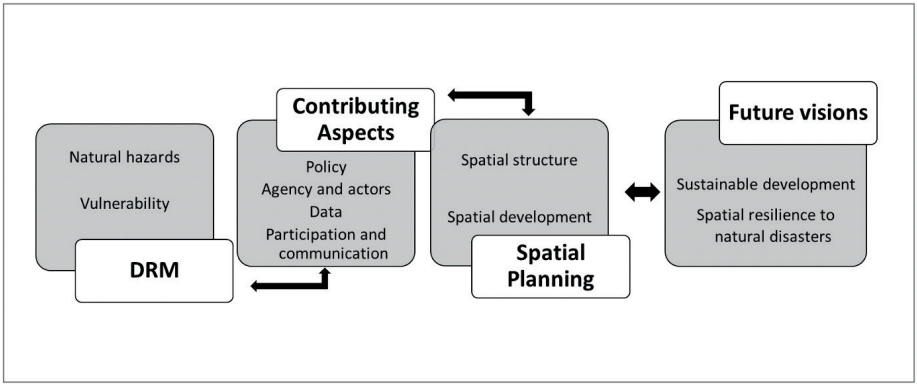

Figure 2: The three levels of policy in DRM / Source: Aniskoff & Lumpkins, 2011, edited by authors

also have specialized agencies for civil protection, which are assigned to supervise and coordinate the necessary actions in case of an emergency, the allocation of resources and to integrate other activities in the plans for disaster risk management (i.e., voluntary activities, private sector funding and initiatives). Furthermore, the municipality and regional administrative government agencies for civil protection address the necessities of personnel, equipment, and recourses for effective disaster risk management and must collaborate with the civil protection bodies. However, the staff is usually inadequate to perform effectively their operational and tactical duties (e.g., Skayannis

& Zafeiriou,2021). As far as funding is concerned, there is an annual budget (national) for prevention actions and disaster risk reduction purposes (not standard, it varies), which is distributed to municipalities by the Minister of Interior. The prevention measures are focused mostly on wildfires, floods, and earthquakes (General Secretariat for Civil Protection, 2005). DRM strategy development can also be funded by research projects or local authorities and relative bodies.
In Albania, the responsibilities and the planning for disaster risk management are more decentralized. The strategic planning level for disaster risk management derives from the National Agency for Civil Protection, embedded within the Ministry of Defence. This Agency had only 9 employees, while in the municipal departments, the number of employees ranges from 7 (in Tirana) to 1 (Toto, 2020). Each municipality should have a directorate or department and an established permanent civil protection committee that is responsible for civil protection and emergency management, but most of their duties so far focus on identifying losses and other impacts after the disaster and on participation in emergency response (Toto, 2020). The local agencies are obliged to plan an emergency fund of 4% of the annual budget. This fund can be used to invest in capacity development, research, preventive measures for hazards, etc. Nevertheless, most municipalities do not use the fund because they save it for emergencies and risk response if needed.
The problem of understaffed agencies and lack of expertise of the personnel is common in the two countries. Furthermore, limited funding for DRM actions hinders additional actions towards creating and implementing radical interventions. Another issue is the verticalization of actions between the three levels of DRM and with spatial planning and development policies.

Data acquisition, availability, and assessment

One of the big challenges in managing disaster risk and adopting a resilient and sustainable spatial development vision is addressing the absence of standardized data (historic and current organized in timelines), at a national, regional, and -most importantly- local scale. Due to physical proximity, municipalities and regions can have instant access to information. In both countries, data may be available at local administrative departments, but not organized in databases, sometimes not even digitalized and, therefore, ineligible for giving feedback to planning and management policy making.
In Albania, over the last few years, there have been several efforts to establish means of acquiring and gathering information and knowledge. At the national level, the database of the Institute of Geosciences (IGJEUM), the reports from the National Operational Centre in the Ministry of Internal Affairs, and the National Archive, gather bad process data, but the lack of accuracy and continuity can hinder their efficiency and efficacy in successful DRM and spatial planning policy.
In Greece, likewise, fragmented and heterogenous data (different standards, forms, and organization) can be found in municipal and regional archives, in printed documents or in maps. There are certain institutes, like GINOA for the monitoring of seismicity in Greece, which report to national and international authorities or the Institute of Geology and Mineral Exploration (IGME) that conducts assessments of soil properties, land and water contamination, etc. Several other networks (seismological, meteorological, radioactivity telemetric, etc.) were established for monitoring and mapping different types of risk (Mavroulis et al., 2022). However, a systemic way to communicate the findings and translate them into policy for the present and the future is not established, yet. Furthermore, COPERNICUS emergency management service - a European programme -mapping based on satellite Earth Observation and in situ data- provides the ability for public authorities to manage emergencies, and to develop disaster risk mitigation and adaptation strategies.

Furthermore, the Hellenic National Platform for Disaster Risk Reduction under the responsibility of GSCP is set up as an open-source network and a forum of governmental agencies and other stakeholders, as a national platform on the prevention web of the United Nations Office for disaster risk reduction, already since 2012. Albania also reports on the progress in DRR, in PreventionWeb, with the help and funded assessments of international donors like the World Bank, or the Global Facility for Disaster Risk Reduction.

In line with the global targets of the Sendai Framework to DRR, both countries can utilize the Monitor, and its sub-system Disaster Loss Data Collection online tool ("DesInventar Sendai") for creating and maintaining fully compliant databases, that will have time-continuity and the required standardization to monitor progress in the 7 targets and the 38 indicators of the framework, but also as a source of valuable information for developing relevant policies (UNDRR, 2018). So far, Greece has not reported any data from 2005-2023, whereas Albania initiated reporting in 2018 and did again in 2022.

For both countries, local- and hazard-specific standardized data about disaster risks and different types of vulnerability, in time and type consistency, must be held, to develop up-to-date information systems that can lead to scenario building and real-time planning, and more informed decisions and implementation of interventions. The communication of this knowledge and the distribution of the findings with the public combined with community access to decision-making, can build resilient future visions and encompass sustainable development pathways.

Participation and Communication

Knowledge management, education, training and informational programs on disaster prevention, preparedness, and mitigation were highlighted as key areas for disaster risk reduction and DRM since the previous century when the first systematic effort for addressing increasing disaster risk took place (Plate & Kron, 1994). Since then, international strategies and initiatives have acknowledged the important role of key stakeholders in disaster management. To investigate the communication of information for DRM and the possible participatory capacities in DRM policy, access to information and decision-making processes, will be reviewed for the two countries.

Community access to information for DRM is of vital importance from the prevention until the recovery stage of a disaster, however, access to information gains a prominent role in the emergency stage. Early warning systems (EWS) have been developed in recent years, since the mass use of mobile phones, the wide use of the internet, and social media, can offer the opportunity for in-time notification of the public. Sadly, neither Greece nor Albania has an early warning system for any type of hazard (as an integrated system of hazard monitoring, forecasting and prediction (1), disaster risk assessment (2), communication and preparedness activities (3) and processes that enable the public to act before a hazardous event (UNISDR, 2009). In Greece, only for some weather-related hazards, the public is notified by 112 (the European emergency number) to, for example, evacuate or not to cross bridges, or park vehicles under trees, in the face of a serious emergency. A recent study by UCL and the European Centre for Training and Research in Earthquake Engineering revealed that an earthquake EWS could give over 10 seconds of warning time at different locations around Europe (Cremen et al., 2022). During a recent earthquake on the island of Euboea (2023), a new EWS from Google was activated and mobile users received notifications if they enable them on the settings of their phone and have internet access at the time of the disturbance (https://en.rua.gr/, 2023).

In Albania, a recent law (No.45,2019) clearly states the need for establishing an integrated information system. Combined with an EWS, this can be the basis for the reduction of the impacts of disaster risk. As far as participation is concerned in disaster risk management, the two countries are in similar low-level terms.

There is no specific, transparent way of how the public's contributions are taken into account during the decision-making processes. In Greece, decisions are made at the high institutional level and posted online (DIAVGEIA) and, there, the public can express their opinions or opposing views. Some workshops or day conferences are held under public, or private initiatives, to inform and educate people in Greece (e.g., the "Inclusive and Collaborative Systems for Heat and Wildfire Risks Governance" forum, in October 2022). In Albania, the municipal, permanent, and civil protection committees are supposed to engage members beyond the municipal staff, while voluntary engagement is rather stigmatized (because of the communist inheritance) (Toto, 2020).

These fragmented initiatives and the lack of actual dissemination of new knowledge hamper the transferability of information to the general population, while the communication channels with experts in the fields of DRM are not as constructive as they could be. Furthermore, the proactive approach to disaster management is not supported and there is an orientation to reactiveness -measures and actions after the hazards strike. The lack of inclusiveness, combined with the limited data access and availability, the narrow technocratic approach to risk management by the responsible authorities, and the inability to keep up with contemporary needs for disaster resilience and sustainable development, can jeopardize the future safety levels and well-being of Greeks and Albanians.

Planning for resilience to disaster risk and sustainable development

In defining resilience, it is important to specify whether resilience is being viewed as a quality, a process, or an outcome. Here resilience is dealt with both as a process for the territories to achieve a new set of functions towards disaster risk management and as a desired outcome (resilient communities, socio-ecological systems, cities, etc.), for "presenting resilience exclusively as a process, policy agendas and goals, can be unhelpfully abstracted" (Matyas & Pelling, 2015). For this paper, resilience is discussed in the frame of disaster risks and spatial planning, hence it employs a socio-ecological system (SES) and a complex adaptive system (CAS) perspective.

Resilience scholars define "general resilience" as the system's ability to withstand shocks and stresses while maintaining system properties, and "specific resilience" as the system's ability to cope with a specified stressor or stressors (Carpenter, et al., 2001). However, the social–ecological understanding of resilience (Folke, 2006) emphasizes another perspective. In addition to the idea of specific resilience, it considers the generic and emerging properties of CAS, which are capable of adapting, transforming and learning while navigating unpredictable evolution trajectories (Gallopín, 2006). Spatial resilience refers to the capacity of a territorial system to recover and restore its desired functions following unforeseen shocks and disruptions and aims to enhance the system's ability to adapt and transform, enabling all its physical and non-physical elements to evolve into a new organizational structure for the territory (Brunetta & Caldarice, 2020).

In a similar context, for many ecology scholars and environmental thinkers, sustainability conveys the idea that certain (unsustainable) human activities threaten to create ecological crises, like climate change, biodiversity loss, or resource depletion. It seems safe to claim that accounts of sustainability vary in their relative emphases of two aspects that seem equally inherent to the concept: the social impacts on natural systems and their moral consequences. Sustainable development emphasizes the idea that the continuity and well-being of society depend on abandoning or

transforming those activities and maintaining or restoring the natural processes now endangered, as argued in the Brundland Report (WCED UN, 1987).
There has been much discussion on the relationship between resilience and sustainability (Meerow et al., 2016; Moser et al., 2019). Human societies and their respective activities are sustainable, if they do not create or augment current risks for themselves and future generations, and they are resilient if they manage to respond to rapid shocks and then "go back to normal". For this analysis, we can be led to the interpretation that sustainability concerns the human origins and the consequences of environmental risks; but derivatives of resilience, like robustness or antifragility, refer only to the risks, shocks, or stressors to the system.
In the context of the two countries' approaches to the concept of resilience, adaptive planning (to the risks, shocks, and stressors) is not embedded fully in sectoral policies, neither institutionally, nor in practice. The horizontal collaboration between different institutions is not satisfactory, however, resilience ideas have been incorporated in various sectors related to disaster risk fields. Specifically, from a disaster-context scope the law on civil protection in Albania was enhanced to include SENDAI framework principles, unlike Greece, where the civil protection law refers only to the institutional structure of the responsible authorities in case of a disaster.

Spatial planning

Spatial planning fails to address the challenge of resilient landscapes with a risk-proof-oriented approach in both countries (except for the building codes and binding anti-seismic rules). In Greece, there are three scales of spatial planning: national (mostly sectoral plans for energy, industry, tourism, etc.), regional (for all the regions except Attica and Thessaloniki, where a different format is applied, because of their larger size and population), and local plans. At the national level, the National Spatial Development Strategy, (the new version after institutional reform, replacing the national spatial plan- not yet issued) and the sectoral spatial plans, have not taken under consideration the hazards and the vulnerability to disasters in their decision processes, whereas the Regional Plans (13,1 per region) have an analysis about the microclimate and other qualities of the region (like biodiversity, flora, fauna, etc.), and geomorphological analysis, as a prerequisite for regional spatial planning, there is no information about the disaster risk the regions might face in the near and long-term future, nor are there any actions outlined to eliminate or mitigate the risk or its impacts.
At the local level, since the 1980s (1337/83- housing law and E.E.A.) and the 1990s (L. 2508/97 for sustainable spatial development), the legal framework provides generic prevention measures for the mitigation of risk and for safer planning (by forbidding e.g., residential/industrial uses on hazard-prone areas), but with it being often applied differently in practice. A recent reform on Spatial Planning Laws (Law 4759/20), Local Urban Plans (LUPs) (Law 4759/2020, Article 10) will be prepared at the level of the municipal unit for all municipalities in the country and through them measures to adapt to climate change, measures to support emergencies, and manage the consequences of natural and technological disasters will be institutionalized, whereas Special Urban Plans (SUPs) (Law 4759/2020, Article 11) (the area of application does not have to be identical to an administrative unit like LUPs) can also be prepared for environmental protection or disaster relief programs and critical spatial problems that require immediate treatment or prevention of completed situations due to lacking urban planning (in case of natural disasters like fires, earthquakes etc.)(Vassi et al., 2022).
In Albania's General National Territorial Plan, climate change is explicitly addressed as a subchapter, and hazards are related to each of the macro-sectors it assesses. Nevertheless, the implemen-

tation is not coherent with the strategic overview. Instead of regional plans (since there is no such level of administration in the country), there are 3 intersectoral plans drafted by the government, covering specific parts of the territory (the Alpine area, the coastal area and the Tirana-Durres region), where the protection against natural hazards and mitigation of effects of climate change is addressed as a subchapter and integrated into recommendations. As for the local-scale plans, Law no. 107/2014 on territorial planning and its bylaws specify the structure of each planning document at the local level. Natural hazards are not specifically required as part of the structure, but there is an obligation from all municipalities to address: analysis of areas with conditionalities of development, environmental analysis: topographic, climatic, hydrogeological, geo-engineering, micro-seismic zoning; use of natural resources; environmental problems; pollutants, etc.

Resilience planning and sustainability approaches are integrated into the spatial plans of both Albania and Greece, but differences arise due to geographical location, socio-economic conditions, and governance structures. Variations exist in their risk profiles, climate change adaptation strategies, governance systems, infrastructure resilience, stakeholder engagement, and regional considerations. Identifying certain common elements in the spatial planning approach of the two countries would reveal the inadequate public participation in the processes, the lack of essential data for informed decisions and the mismatches in the horizontal application of resilience approaches and intersectoral sustainable development goals. However, since resilience and sustainability are commonly identified as processes, too, the two countries try to "bounce forward" (Manyena, 2006) and make systemic changes to be able to plan for a resilient future.

Discussion

In recent years much effort has been made to plan for sustainable and resilient cities and regions in Greece and Albania as well. However, the components of DRM are not recognized as vital components of sustainable development or resilience building in spatial planning practice but are only mentioned as wishful goals, with no specific focus or scope in the planning practice. Risk assessments are not playing the important role they should when planning for resilience. For both countries, spatial planning is strongly linked to and heavily dependent on the institutional framework (plan by decree). By extension, the legal traditions of each country influence the way spatial policies are carried out as well as the result at the level of produced space. In fact, the spatial planning laws, especially those for urban areas, that are characterized by higher complexity compared to those of rural, reflect the lack of flexibility in going along with dynamic changes in the legal systems of the respective countries.

The spatial plan formats in the two countries were recently revised to include either the concept of resilience, or environmental protection, however, an implemented result in practice is yet to be seen. Holistic integration of hazard prevention/ mitigation and natural disasters preparedness requires 1) a different planning culture, when special plans for the different special scales will take under consideration risk assessment, historic data analysis, and prediction models to be effective for the future, 2) greater interaction with the priority axes (whether spatial or developmental) of the plans, than the simple listing of the risks and related indicators of each spatial unit, 3) actual implementation of the plans before they become obsolete, over time, allowing urban systems to become more sustainable and resilient, in the present and future as well.

The two countries, share certain common hazards (e.g., earthquakes, heat waves), but Albania has taken many steps forward in the disaster management pathway. A vivid example is the monitoring data that UNDP uses via the Sendai Framework Mechanism for monitoring progress related to the Targets set in the strategy. Albania is an active participant in the platform, while Greece has

never reported any data. Furthermore, the Albanian government has now a National Strategy for Disaster risk reduction (2023), which will be followed by a National Civil Emergency Plan, while in Greece a similar plan is in place for two decades now, without further updates to the constantly changing and dynamic changes in the risk and hazard patterns. At the local government administrative level, Albanian municipalities are obliged by law to establish risk reduction platforms by assessing disaster risks and related vulnerabilities, and by adopting disaster risk reduction strategies and emergency plans, while in Greece a plan must share the jurisdictional roles between civil agencies. These are important steps for resilience building towards disasters and for developing coping and adaptive capacities of different spatial entities, since by establishing monitoring mechanisms and ensuring access to information, knowledge on the matter is enhanced, and can be utilized for more informed decisions in policy making.

Even though the laws in both countries clearly define the duties and roles of the authorities in disaster management, the linkages and collaborations of the different governance levels remain weak and unclear. In Greece, strategies are decided at the central level (state), with regions and municipalities having (if they do) a supporting role and, regarding the participatory procedures, follow an electronic, few-day stay posting of the decisions, where citizens can express their opinions online, without any proof of their contribution to the result. In Albania, all DRR processes need to have coordinated decision-making through the establishment of a Civil Emergency Council, with actors from the government and civil society. In practice, these councils are not operative and the process of DRR planning is mostly developed top-down, through donor support.

Scientific knowledge is included on an arbitrary basis, because of the lack of integrated disaster risk management databases (available for the public). Participatory processes occur on a sporadic basis, mostly for data triangulation and participatory mapping of hazards, when necessary. If we argue that resilience is a specific outcome in a certain space and time, not being able to transfer knowledge and communicate it at the multiple levels of the social system and governance, is a serious challenge that both countries should invest in.

Local governments can make a big difference in disaster management and socio-ecological and socio-technical resilience, due to the physical and cultural proximity of the place. However, their role in resilience building is weak in the two countries. As resilience should be addressed territorially and on an intersectoral basis, municipalities must instigate resilience and adaptation efforts in all sectors in terms of disaster risk reduction, hazard-prone areas (as areas of focus and not of administration), of spatial planning, and participatory risk assessments, which would constitute a valuable tool in completing knowledge beyond political jurisdictions and is now missing in the two countries' disaster risk reality.

Another major handicap is the absence of standardized data. There are very limited capacities at the local and national levels, and limited monitored data to assess the ecosystem's quality, and environmental performance, let alone to become the basis for a risk mitigation planning and management strategy. National, governmental, and research institutes responsible for monitoring and conducting studies on climate, hydrology, geology, seismic events, etc., maintain their databases that are not as a whole easily accessible to municipalities in real-time.

At the local level, municipalities can play an instrumental role in establishing and implementing strategies and plans focused on DRM, so that local preparedness will improve, both technically and financially, while also facilitating effective communication with communities and non-state actors. Municipalities, in both countries, should also prioritize the establishment of well-equipped civil protection departments, ensuring they have a diverse range of experts and ongoing training. These departments should collaborate with other sectors to address various aspects of local

resilience. It is essential for municipalities to create their databases, incorporating historical data on hazards, disaster risks, and vulnerabilities specific to their territories. Utilizing information systems would enable real-time planning, scenario building, and informed decision-making. The national government can assist by providing information, tools, and methodologies for different territorial and social scales.

However, they should not solely rely on these databases but also gather local information and engage with citizens. Municipalities, with the support of other stakeholders, should establish local resilience dashboards with dynamic indicators to benchmark and compare different local governments and territories, and to monitor early prevention efforts. Actively participating in international initiatives and joining resilience and adaptation networks would enhance their knowledge and access to financial and technical support and pave the way for a more sustainable future.

However, technical resources for resilience planning are scarce, because of a lack of capacities and lack of integration between the planning department and civil protection department at the local level. Many initiatives, like participating in resilience projects, and preparing useful studies and reports to inform civil society for DRR and management in this regard are supported by research institutes and local NGOs through donor funding. Nevertheless, a comprehensive network of systematic knowledge transfer is missing.

In conclusion, the policy objectives of territorial resilience to disaster risk in Albania and Greece are not clearly defined, while the capacities of the two countries in DRM, despite the progress noted, remain weak (in policy, agency, data, and participation). While the concept is mentioned in the DRR relevant legislation (laws on civil protection), it is expected to be addressed in the national strategy for civil protection. However, it is uncertain whether this strategy will encompass objectives and measures that extend beyond the civil protection sector, indicating an integrated approach to resilience.

A national policy is required to foster socio-ecological and territorial resilience as a pathway to sustainable development, in Albania and Greece. Civil protection strategies might be instrumental in this effort, but it is crucial for governments to facilitate coordination and collaboration across various sectors and administrative levels. This entails integrating policies and actions related to climate adaptation, spatial planning, infrastructure, water resources, energy, forests, fisheries, and more, aligning them towards resilience goals. Adopting a territorial perspective and blending diverse sectoral perspectives across all administrative levels for DRM, could be an approach that promotes a holistic planning mindset and the sustainable utilization of natural resources.

References

Ahern, J., 2011. From fail-safe to safe-to-fail: Sustainability and resilience in the new urban world. Landscape and Urban Planning, 100(4), pp. 341-343.

Alexander, D. E. (2000). Confronting Catastrophe: New Perspectives on Natural Disasters. Oxford University Press. https://books.google.de/books?id=kw-tQgAACAAJ

Aniskoff, P. & Lumpkins, D., 2011. Comprehensive Preparedness Guide (CPG) 101, Version 2.0: Developing and Maintaining Emergency Operations Plans Overview Briefing [presentation]., s.l.: FEMA.

Batty, M., 2008. Cities as Complex Systems: Scaling Interactions, Networks, Dynamics and Urban Morphologies. UCL Working Paper Series.

Brunetta, G. & Caldarice, O., 2020. Spatial Resilience in Planning: Meanings, Challenges, and Perspectives for Urban Transition... In: W. Leal Filho , και συν. επιμ. Sustainable Cities and Communities.. επιμ. s.l.:Springer, Cham., p. 628–640.

Carpenter, S. R., Walker, B. H., Anderies, J. M. & Abel, N., 2001. From metaphor to measurement. Resilience of what to what?. Ecosystems, Τόμος 4, pp. 765-781.
CRED, 2022. 2021 Disasters in numbers, Brussels: CRED.
Cremen, G., Galasso, C., & Zuccolo, E. (2022). Investigating the potential effectiveness of earthquake early warning across Europe. Nature Communications, 13(1), 639. https://doi.org/10.1038/s41467-021-27807-2
Folke, C., 2006. Resilience: The emergence of a perspective for social-ecological systems analyses. Global Environmental Change, 16(3), pp. 253-267.
Fournier d'Albe, E. M. (1985). The quantification of seismic hazard for the purposes of risk assessment. 77–84.
Freddi, F., Novelli, V., Gentile, R., Veliu, E., Andreev, S., Andonov, A., Greco, F., & Zhuleku, E. (2021). Observations from the 26th November 2019 Albania earthquake: The earthquake engineering field investigation team (EEFIT) mission. Bulletin of Earthquake Engineering, 19(5), 2013–2044. https://doi.org/10.1007/s10518-021-01062-8
Gallopín, G. C., 2006. Linkages between vulnerability, resilience, and adaptive capacity. Global Environmental Change, 16(3), pp. 293-303.
General Secretariat for Civil Protection, 2005. Report and information on disaster reduction for Greece for the World Conference on Disaster Reduction (Kobe-Hyogo, Japan, 18-22 January 2005), Athens: General Secretariat for Civil Protection.
Gountromichou, C., Manousaki, M., Doga, A., & Eythimios Lekkas. (2014). SEISMIC DISASTER PREPAREDNESS POLICY IN RISK MANAGEMENT PLANNING -GREECE. https://doi.org/10.13140/2.1.1054.3365
Government Gazette 1108/B'/ 21-07-2010, 2010. Gov 2010. Flood risk assessment and management, in accordance with the provisions of Directive 2007/60/ EC 'On flood risk assessment and management', of the European Parliament and of the Council of 23 October 2007. Ath, Athens: Greek Government.
Government Gazette 423B, 10.04.2003. Approval of the General Plan of Civil Protection on 7.4.2003 codenamed 'Xenocrates', Athens: Greek Government.
Government Gazzette 161/A, 9.9.2021. Establishment of the Ministry of Climate Crisis and Civil Protection, transfer of services and responsibilities between Ministries., Athens: Greek Government.
Grum, B. & Grum, D., 2023. Urban Resilience and Sustainability in the Perspective of Global Consequences of COVID-19 Pandemic and War in Ukraine: A Systematic Review. 15. 1459. 10.3390/su15021459. Sustainability, 15(2).
Hewitt, K., 1983. Interpretations of Calamity. Boston: Allen and Unwin.
https://en.rua.gr/, 2023. Google Sends an Earthquake Alert: How to Activate the App. https://en.rua.gr/.
IPCC. (2012). Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation: Special Report of the Intergovernmental Panel on Climate Change (C. B. Field, V. Barros, T. F. Stocker, & Q. Dahe, Eds.; 1st ed.). Cambridge University Press. https://doi.org/10.1017/CBO9781139177245
IPCC. (2023). IPCC:2022, Climate Change 2022: Impacts, Adaptation and Vulnerability (p. 3056) [Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change]. Cambridge University Press.
Manyena, S. B. (2006). The concept of resilience revisited: The Concept of Resilience Revisited. Disasters, 30(4), 434–450. https://doi.org/10.1111/j.0361-3666.2006.00331.x

Matyas, D., & Pelling, M. (2015). Positioning resilience for 2015: The role of resistance, incremental adjustment and transformation in disaster risk management policy. Disasters, 39(s1), s1–s18. https://doi.org/10.1111/disa.12107
Mavroulis, S., Ilgac, M., Tunçağ, M., Lekkas, E., Püskülcü, S., Kourou, A., Sextos, A., Mavrouli, M., Can, G., Thoma, T., Manousaki, M., & Karveleas, N. (2022). Emergency response, intervention, and societal recovery in Greece and Turkey after the 30th October 2020, MW = 7.0, Samos (Aegean Sea) earthquake. Bulletin of Earthquake Engineering, 20(14), 7933–7955. https://doi.org/10.1007/s10518-022-01317-y
McGahan, P., 1986. Urban Sociology in Canada. Toronto: Butterworth and Co., Ltd.
Meerow, S., Newell, J. P., & Stults, M. (2016). Defining urban resilience: A review. Landscape and Urban Planning, 147, 38–49. https://doi.org/10.1016/j.landurbplan.2015.11.011
Moser, S., Meerow, S., Arnott, J., & Jack-Scott, E. (2019). The turbulent world of resilience: Interpretations and themes for transdisciplinary dialogue. Climatic Change, 153(1–2), 21–40. https://doi.org/10.1007/s10584-018-2358-0
O'Keefe, P., Westgate , K. & Wisner, B., April 15 1976. Taking the Naturalness out of Natural Disasters. Nature. 260.. Nature, Band 260, p. 566–567.
Papazachos, B. & Papazachos, C., 2003. The earthquakes of Greece. In Greek επιμ. Thessaloniki: Ziti Publications.
Plate, E. J., & Kron, W. (1994). The international decade for natural disaster reduction (IDNDR): A challenge to science. Soil Dynamics and Earthquake Engineering, 13(1), 45–48. https://doi.org/10.1016/0267-7261(94)90040-X
RESILIENCE. (2022). RESILIENCE, 2022, Resilience planning & development needs of regional authorities and stakeholders (D1.1, p. 66). RESILIENCE Consortium, 2021. https://regilience.eu/wp-content/uploads/2022/12/REGILIENCE_D1.1-Resilience-planning-development-needs-of-regional-authorities-and-stakeholders.pdf
Renn, O., 2008. Concepts of Risk, An Interdisciplinary Review - Part 2: Integrative Approaches. GAIA - Ecological Perspectives for Science and Society, 17(2), p. 196–204.
Rockefeller Foundation. (2019). Resilient cities, resilient lives: Learning from the "100RC network" (p. 140). Rockefeller Foundation.
https://resilientcitiesnetwork.org/downloadable_resources/UR/Resilient-Cities-Resilient-Lives-Learning-from-the-100RC-Network.pdf
Saunders, W. & Becker, S., 2015. A discussion of resilience and sustainability: Land use planning recovery from the Canterbury earthquake sequence, New Zealand. International Journal of Disaster Risk Reduction, Τόμος 14, pp. 73-81.
Skayannis, P. & Zafeiriou, E., 2021. Risk – Uncertainty – Complexity and Foresight as alternative planning tools for natural disasters: The Medicane 'Ianos' in Greece. Annual Review of Territorial Governance in the Western Balkans, Τόμος 3.
The Rockefeller Foundation, 2022. 100 Resilient Cities, s.l.: s.n.
Toto, R., 2020. Building Resilience For Local Governments In Albania: Legal And Institutional Challenges, s.l.: Co-PLAN Resilience Series.
UN. (2015). Transforming our World: The 2030 Agenda for Sustainable Development. UN. sustainabledevelopment.un.org
UNDRR, 2018. sendaimonitor.undree.org, s.l.: UNDRR.
UNISDR, 2009. 2009 UNISDR Terminology on Disaster Risk Reduction, Geneva, Switzerland: United Nations International Strategy for Disaster Reduction.
United Nations, 2015. Transforming our world: the 2030 Agenda for Sustainable Development,

s.l.: UN General Assembly.
Vassi, A., Siountri, K., Papadaki, K., Iliadi, A., Ypsilanti, A., & Bakogiannis, E. (2022). The Greek Urban Policy Reform through the Local Urban Plans (LUPs) and the Special Urban Plans (SUPs), Funded by Recovery and Resilience Facility (RRF). Land, 11(8), 1231. https://doi.org/10.3390/land11081231
Venghaus, G., 2021. Final Evaluation of the 2019 Albania Earthquake Emergency Appeal, s.l.: IFRC.
WCED UN, 1987. Our common future—The Brundtland report, Oxford, UK: Oxford University Press.

Scientific Academy of Albania