

Strategic Planning and Safety of Mountainous Areas in Türkiye's Public Administration Organization

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Abstract

Türkiye is a country with lots of mountainous areas. Türkiye's total area is 782219.7269 km² and 583770.9139 km² of this total area is composed of mountainous areas. In other words, our country's 74.63% consists of mountainous areas. 50% of our country's lands are higher than 1000 meters and 2/3 of the total area is above 500 meters of altitude. Studies have shown that Türkiye's average height is higher than the continent of Asia. Mountains are being opened to settlement in an ever-increasing fashion starting from the foothills. Despite the climate changes and the increasing population on the mountains, there is still no mountainous area administration policy in Türkiye. Nevertheless, administration of mountainous areas is related to the important topic of sustainable society, sustainable resource management. In other terms, the issue is strongly related to the important matter of social development enhanced by the untouched and natural environment. Humans first need to design the environment that they live in. It is crucial to highlight the importance of mountainous areas and define multifaceted safety issues related to the features of those areas depending on their geographical position. There are lots of interdisciplinary subjects regarding mountains to be directly or indirectly studied. What is the important factor? Is it the organization? Or is it the effects of that organization? The answers to these questions lie in the lack of administrative awareness regarding mountains in Türkiye and the problems arising from the lack thereof. Accordingly, it is crucial to include the administration of mountains into the public administration agenda and adapt the current protective improvements regarding mountainous areas taking place in the Council of Europe of which Türkiye has been an official member of since 1950. Due to unplanned settlement and the lack of administration structure's adaptation to new circumstances, we directly face serious threats listed below. The mountains and their administration should not be consi-

dered as another element of the bundle of human or nature-induced problems such as intense heats, intense cold temperatures, strong winds and storms, drought, falling rocks, landslides, fires, terror, and etc. The responsibility to separate the mountains from other issues, the need to turn the “planning and administration of mountainous areas” into a matter of public policy, preparation of action plans regarding the structure of the necessary organization and the safety of mountainous areas are all included in the scope of this study. In addition, the paper also includes an administration model suggested by the Council of Europe supported by the notes of the author taken during the Academic Workshop on Sustainable and Effective Administration of Mountainous Areas and Society 5.0 held on December 11, 2019 in Izmir with the help of the Governorship of Izmir in celebration of the International Mountain Day.

Keywords

Mountainous Area Administration, Governance, Interdisciplinarity, Safety, Social Awareness

1. Introduction

Mountains are important morphological formations that shape the earth. The word “mountains” is generally perceived as the areas of high altitude with low population and preserved nature. However, instead of using a precise and universal definition, it is preferred to use a definition based on a certain administrative unit’s geographical determinations (regarding topographic criteria) (Pantić, 2015). Therefore, it is important to note that there is a difference between the mountain definitions of different countries depending on their use of these areas.

“Mountains” are areas that are basically defined with a geographical location whereas “mountainous area” also encompasses the interaction environment of those mountains. In Europe, there are local administrations often defined as “mountain municipalities” established in mountainous areas. In Türkiye, however, the villages founded in mountainous areas are called “forest villages”. And there is no such definition as “mountain municipalities” within the organization of public administration. There are areas which could be called “rural neighborhoods” if gradually recognized by the municipality councils of Metropolitan Municipalities (Law No. 5216 additional article no. 3 and Regulation dated April 17, 2021). These areas are mostly zones that turned into neighborhoods of the city with a change of status but in reality they “failed to turn into” such zones which in turn keeps them at the status of old villages.

And the definitions which are based on sole criterion, that “sole criterion” is the elevation from the sea level. Depending on the general topography of the terrain, the highest point and the percentage of mountains within the total area of a country, in other words, the minimum elevation threshold varies signifi-

cantly¹. UNEP World Conservation Monitoring Centre (WCMC) uses the concept of altitude only to define the mountains that are higher than 2500 meters. In Türkiye there are 74 mountains that fit this criterion (Cagatay Belgen) such as the mountain Uludag with an altitude of 2543 meters, the Mountain of Agrı with an altitude of 5137 meters and the Mountain of Hasan with an altitude of 3235 meters. The criteria of altitude and inclination are combined to define the status of mountains that are higher than 1000 meters. For lower elevations (300 - 999 m) an additional criterion of height interval is used locally to define mountainous areas. These linked criteria have been developed over and over by scientists, policy makers and mountain climbers. According to EU, these areas are about 1.7 million km² (*Mountain Areas in Europe Final Report, 2004*).

Here are some European examples for mountain altitude criteria: Ireland considers areas to be mountainous above 200 meters and in the Czech Republic this threshold is 700 meters. For Norway, Bulgaria, and Belgium the thresholds are respectively 600, 420 and 300 meters. Sometimes, mountain elevation values may differ even within a country. As a matter of fact, Serbia where the threshold of a mountain height was considered to be 500 meter within the Sustainable Development project in Mountainous Areas, this value has changed to 600 meters (*Mountain Areas in Europe Final Report, 2004: pp. 1-21*).

Denmark, Netherlands and the Baltic countries of Estonia, Lithuania and Latvia are countries which do not have mountainous areas. The countries with the largest proportions of mountains in Europe are Austria (73%), Greece (78%), Bulgaria (53%), Slovakia (62%) and Slovenia (78%). And more than 90% of the territory of Norway and Switzerland is mountainous. There are 6303 municipalities in the Alpine region, with an average population of 2446 people.

Finland and Norway does not have a definition for mountainous areas and there is no administrative definition either. Discussions are being held in these countries about special measures for “deforested mountains”. In Poland, in the Law of Mountains which formed the basis of the country’s mountain policies, definitions of mountains were made between 1986 and 1989. The answer to why there is no administrative definition for mountainous areas has to do with the purpose of expanding environmental protection. Essentially, a protectionist culture has been formed and solidified regarding the mountainous areas. In Norway, the development and protection of mountainous areas are being considered as two different action categories. In this country mountainous areas are being considered as a whole with different functions such as agriculture around that mountain whereas in Ireland, Hungary, Slovakia and Spain, the main focus is the mountain itself.

The countries which have mountain definitions for regional development

¹Altitude is a concept of height used in aviation and astronomy to define the vertical distance between an object and a reference point. Inclination is a mathematical term that signals the angle or gradient of a line. A bigger inclination represents that the line is steeper. Inclination can also be defined as the ratio of vertical change to horizontal change between two points on a line. This definition combines different criteria.

such as Bulgaria, France, Italy and Switzerland aim for a regional and/or more general policy.

As one can see, mountain is an important indicator of area administration related to the expansion of public services and formation of sustainable environment criteria. In contrast, the area in Erzurum at an altitude of 1,850 meters is defined as a “plain” in Türkiye and called the Plains of Erzurum. And villagers of mountains are called forest villagers (Constitution dated 1982, Article 170). By combining the subject of Forestry and Agriculture, these fields are managed under the direction of the “Ministry of Agriculture and Forestry”. Paradoxical to the structure of this organization, it would be appropriate to remind that there is a constitutional provision stating that one could not do activities of “agricultures and animal husbandry” in forested areas (Constitution dated 1982, Article 169).

However, Türkiye is a mountainous country. In today’s conditions, taking into account the climate change and the rise of the sea levels, Türkiye has gained even more importance with its mountains. According to international classifications, 74.63% of Türkiye’s overall terrain is composed of mountains. The country’s overall area is 782219.7269 km² and 583770.9139 km² of it formed by mountains. The country has a topography which is both high and rugged with elevations above 5000 meters. Studies have revealed that 50% of the territory of Türkiye is higher than 1000 meters, 2/3 of it is over 500 meters, and the average elevation is more than the average in the continent of Asia with 1141 meters (Gönençgil & Dal, 2020: p. 5; Dal & Gönençgil, 2018: pp. 907-913). It is also crucial to underline Instrument for Pre-Accession Assistance Rural Development Programs (IPARD) (2017-2013) and (2014-2020) defines mountainous areas as an area located at an altitude of minimum 1000 m, or located at an altitude between 500 m and 1000 m with a slope of minimum 17% (IPARD II, 2022: p. 21, 84).

The Agenda 21 which serves as an action plan for Rio Summit 1992 focuses on “Mountains and Mountainous Areas” in its Article No. 13. The same year the subject of mountains was still a draft but thanks to the “Charter of Mountain Regions” (1992) some methods and awareness around this subject has been created among the member states of the European Council. It is not logical to expect a common definition of mountain regions where the European Council does not look for a common criterion in its regulations regarding the “minorities” and states take their own definition into consideration. In fact, studies of European Union regarding mountain regions also take the directions of policies into consideration. As a result, the regional planning of public service becomes significant in terms of national administrations and the formation of public policies.

2. The Problem of Türkiye and Mountainous Area Administration

Mountain administration in Türkiye is not primarily at the center of a public policy.

2.1. Mountainous Area Awareness in Türkiye

There could be many excuses for this. One of the prominent problematic area in this subject is the inability to complete strategic spatial plans that take the whole of Türkiye into consideration due to Spatial Strategy Plans lack of data. According to the SWOT analysis of spatial strategic plans, the weaknesses are listed as follows: (Karadağ, Demiroğlu, & Cengiz, 2022: p. 94). Although there are many data on the natural and cultural structure, very few of them are spatial data.

- Most of the data is not in numerical form.
- It is difficult to reach detailed information about the data production method.
- In most data production, the old method is used and only some updates are made.
- Satellite images cannot be used adequately in the production and monitoring of spatial data.
- Spatial data to be used for making strong decisions on issues such as protection of nature and environment, education on disaster risks, and etc. are insufficient.
- The spatial planning archive for monitoring the change is insufficient.
- At scales smaller than 1/25,000, gradually developed spatial, numerical and printed data are insufficient.
- There is no accurate, reliable spatial data regarding the local areas... There are no plans/projects related to urban open and green areas. This situation affects many projects such as green infrastructure systems, disaster plans, flood administration process and there is no data integrity thereof. New topics such as storms have also been added to the classic problems.

Studies covering mountainous areas that are often excluded from systematic planning, which are clearly specific to mountainous areas, “compensating for reactive strategies, threats and structural difficulties” are becoming increasingly important. Economic, political, cultural, social and technological developments are rapidly affecting the discipline of public administration. It is expected that the structures in accordance with these new developments brought by the change will be transferred to the normative and administrative field at the same rate. Due to its philosophy, the discipline of public administration explains the change that has taken place. Society expects these explanations to be consistent in terms of cause and effect relations. The principles developed in the evaluation of the concept of public service are important in terms of social peace and security (Karaman, 2019a: pp. 33-34). In mountainous areas, children, young people and women are the disadvantaged groups (Karaman, 2019b: pp. 274-276). Therefore, they are considered as a priority and placed at the center of capacity building and community development policies.

From the time I started my academic studies in the early 1980s since today, Türkiye has worked on local and central analyses based on public policy making with regard to reforms in public administration. However, the issues of “moun-

tains and administration of mountain regions” do not present themselves in those extensive pieces of research. In contrast, there are carefully studied rich academic literature in the area of “rural area” including the doctoral thesis studies that the author manages and contributes to.

2.2. Relationship between Legal Regulations and Mountainous Areas in Türkiye

When the official documents in the network of Central Government relations in Türkiye are examined, from the beginning of the Republic to this day, the administration does not seem willing to work directly on mountains and administration of mountainous areas. Unlike the unions established under so many different names, the municipalities of the mountainous areas do not even have a “Union of Municipalities”. In addition, the lists depicting the mountainous regions which proved that relevant administrations used to work on these issues before the Law dated 2012 and numbered 6360 ordering the villages to be switched to the status of neighborhoods have been removed from the Internet. For example, <http://www.tarim.gov.tr/TRGM/Link/19/Daglik-Alan-Listeleri> accessed on June 13, 2016 but currently there is no actual access to this link. Information about mountain names can now only be obtained from curious academics.

Apart from sports clubs, a development based on “mountain awareness” in the sense of local governments has not emerged during the publication process of this article. In fact, when the word “mountain” is searched on an online search engine, it is seen that there are no official documents that encompass this word. The search results only show other longer words or expressions that have the Turkish word for mountain—“dag”—in them. On December 5, 2013, I have founded the organization of İzmir’s and Türkiye’s first association based on administration of mountainous regions called “Association on the Administration and Sustainability of Mountain Regions”. The most important momentum trigger of this association was when we organized an International Mountain Partnership between 17 and 20 September 2013. 105 guests from 32 countries joined this meeting and there were Turkish representatives both on a local and national level. There were no participants related to mountain sports, NGOs working on topics regarding mountains, nor any other association on mountain-related issues. The election of Türkiye as the European Representative at this meeting to the Directing Committee to serve in the 2014-2017 period for the first time was an important administrative reflex that is worth noting but it has not been further developed.

While the forestry administration has become a prominent issue within the organization, administrative works were carried out with a participatory approach. On 22-23 July 2014, during the Bolu Workshop, they decided to form the Special Expertise Commission for Mountainous Area Administration. This commission was abolished without even being activated. However, there were also studies that were recorded during this period. On October 13, 2014 in Kay-

seri, 2nd Workshop was held for the creation of “Strategy Document on Mountain Administration”. The main topic of the Kayseri Workshop (2014) was the sustainability and administration of mountains and mountainous areas. The themes of the workshop are based on the principles of the “Draft Charter of Mountainous Areas” which is one of the works conducted under one of the Partial Agreements of the Council of Europe which is called the Congress of Local and Regional Authorities.

The “Mountain Administration Draft Strategy Document”, which is the evaluation of the Kayseri Workshop (2014) studies that have emerged, has not been officially published. The author, who participated in the creation of this work, which has not been given official identity, has made the text accessible (Toprak, 2018: pp. 10-21). As one of the 17 member states of the Mountain Partnership in Europe, Türkiye (FAO, 2022) actively participates in the studies in the division of Land Protection and Basin Rehabilitation (Ministry of Agriculture and Forestry)².

However, within the duties of the Department of Soil Conservation and Basin Rehabilitation (OGM, 2022) are task related to the protection of soil in mountainous areas; development of water resources, and fight against erosion in order to establish and improve the forest ecosystem and implementing whatever is necessary. These issues are carried out by the “Mountainous Area Administration Branch Directorate”, which is among the branches of the aforementioned department. In summary, the Ministry and the Branch Directorate within it are actually not directly related to mountain administration but focuses more on nature-induced disasters such as avalanches.

In Türkiye, fundamental ministries such as the Ministry of Environment, Urbanization and Climate and the Ministry of Agriculture and Forestry have also been assigned tasks in mountainous areas regarding only the “countryside”. Additionally, the word mountain is pronounced only once in the Law No. 442 on Villages while defining the borders of a “village administration”. Looking at all the legislation, it is seen that although it falls into the field of many legal disciplines, such as the Cadastral Law and the National Parks Law, the main basic principles of the legal regime pertaining specifically to mountains and mountainous areas have not been determined (Koç, 2020). However, in the mountainous areas where each day a new type of the disaster occurs, there still are no measurement stations and the number of storms that are not recorded because of this are ever-increasing and more frequent but unfortunately there still is no awareness around this issue and university buildings are expanding on the mountains. Examination of the situation of settlements in mountainous areas and especially university campuses has not been done yet and the necessity of

²Ministry of Agriculture and Forestry of the Republic of Türkiye was founded as an institution that worked under the Presidency of Turkish Republic and it was responsible for agriculture and forestry affairs. Upon the repealing of legal regulation related to the organization and duties of Food, Agriculture and Animal Husbandry, and Forestry and Water Affairs ministries, the Ministry in question has been reestablished based on the Presidential Decree No.1, p. 218.

administrative responsibility and corporate-social responsibility has not yet been brought to the agenda. Research to be conducted on this issue is important.

3. The Importance of Mountains

Mountainous areas have numerous values due to their nature such as the existence of water resources, flora and fauna diversity, mines, and etc. However, the general opinion regarding the value of Türkiye's mountains is mostly related to the level of "richness" in terms of diversity.

The "mountains" that should be included in the public policy of Türkiye are undoubtedly important. Most of our mountains have volcanic characteristics and have hot water sources. Central Anatolia is rich with young volcanic areas with Mount Erciyes (3917 m), Mount Melendiz (1898 m), and Mount Hasan (3268 m). Biga, Dumanlı and Yunt Mountains in Aegean Region are also volcanic. The Kula Volcanoes near the Kula district of Manisa are young volcanoes. Mount Ararat (the latest activity in 1840) and Mount Tendürek (the latest activity in 1855) are two of the volcanoes whose activity has recently ended and they are currently spraying hot water and gases. According to geological records, the last lava flows from the Volcano Nemrut were seen in 1441, 1597, and 1692. Geologists point to Mount Nemrut (1692, the most recent activity), which emits hot gases from its volcano located on the borders of Bitlis, as the most "risky" volcano in Türkiye that can start its activation. The last activity of the Hasan Mountain (Aksaray and Nigde) was recorded in November (2021) and is being monitored as a geographical formation that has gained importance with its new volcano feature. Since it encompassed the characteristics of a volcano in the past makes us strongly believe that the mountain produces rich valuable stones and/or mineral resources. Despite all this reality, the mountainous areas have been administratively withdrawn into "field-based solitude" and have been lost in different variable sectoral policies.

In the provincial administrative system centered on the governor, it is unclear how much the governor and the district governors, who are the largest local authority, can direct the necessary attention in their busy pace of work to the mountains dispersed on a large area located within the provincial borders of their jurisdiction. Our administrators, who are significant in the administrative structure of Türkiye, do not deserve the establishment of a "mountain and terror" relationship for some mountainous regions. The reason is that security issues have a multifaceted economic, health, socio-cultural content and they can be evaluated with an interdisciplinary approach between sectors and institutions.

The strategy document "Action Plan for Rural Development of 2015-2018" prepared during the period of the Ministry of Food, Agriculture and Animal Husbandry as a result of the studies carried out about the rural areas ([Rural Development Action Plan \(2015-2018\), 2022](#)) states no special administration style for "mountainous regions". However, the document opened up space for implementation works to be carried out in terms of both the published objectives

about rural development and mountainous rural areas. Reevaluating and revitalizing the action plan becomes important with the birth of the concept of “rural neighborhood” created within the public administration with the Regulation of 2021 on Rural Neighborhood and Rural Settlement Areas used in the administrative area of Metropolitan Municipalities based on the Law No. 6360 focusing on rural area activities and social development works. The reason is that the regulations do not take into account rural development, but only have a structure that focuses on tax reduction in rural areas in question. These two regulations should be synchronized.

In the National Rural Development Strategy Document (2021-2023) ([National Rural Development Strategy \(2021-2023\)](#), 2021: p. 8, 13, 45, 64). Although a strategy focused on rural development activities has been established, mountainous areas have superficially been mentioned as disadvantaged areas. Islands, protected areas, wetlands, and etc. have been shown as other areas. An important statement that attracts attention here is the following sentence: “If there is a need to differentiate in favor of these areas, the definitions used by the relevant public administrations and/or the technical studies that they will conduct will be used for defining these specific places within the relevant framework of the legislation.” Although the expression is not completely clear, it is possible to think that the definition of mountainous areas can be created if it is considered necessary. In my opinion, although this discourse in the document of 2021-2023 does not entail a provision, it can be seen as a positive opinion from the administration which is in line with what this article supports. In the strategy document, it has been determined that the migrations, although their type is not specified—so they can be considered as internal migration—take place from mountainous areas to lowlands. This will mean loss of human resources. Therefore, alongside with several measures to develop agriculture, the works to be conducted include the reduction of development problems caused by the disadvantaged location of villages and especially mountain villages and villages built within the areas of conservation. By using the help of participatory approach, villagers are desired to be met with sustainable livelihood sources and the biological and ecological richness is wanted to be conserved. In addition, the number of “mountain villages” is not directly specified among the total number of villages. The fact that mountain villages are only known by the administrative authorities and their status depends on these authorities’ discretion is one of the many issues to be criticized.

In mountains and mountainous areas in Türkiye, there is a lack of infrastructural and basic services. And for this reason, young people living in mountainous regions have a lower chance of accessing high-quality education in their region. If they have the opportunity, they usually continue their careers in urban centers and often, as mentioned above, they do not return to the villages where they were born. This means economic and social erosion. Despite the characteristics of mountain environments, cultures and economies, it is observed that the

challenging characteristics of mountain environments are not taken into account especially by the administration. The administrative principles do not consider the issue as a whole, ignore the mountains, call everything as “countryside” and build themselves solely on “forests”. However, a forest is “a land ecosystem consisting of various trees, shrubs, herbaceous plants of different heights and sizes, fungi, microorganisms, insects and animals, usually formed naturally in a soiled area” whereas a mountain is a place. Important documents on this subject matter include the “Draft Charter of Mountainous Areas” which is one of the European Council’s Charters of Local and Regional Authorities, and the “Model Law on Sustainable Development of Mountainous Areas” (МОДЕЛЬНЫЙ ЗАКОН О развитии и охране горных территорий) (<http://igras.ru/news/2697>) dated November 20, 2020 composed of 38 Articles and 10 chapters created by one of our neighbors Russia (Aliyaroglu, 2022).

The latest study, the Mountain Education and Innovation Manifesto (MEIM) which is worth international attention and creates a new awareness, has also been opened for signature. During the “Climate and Biodiversity” week in the Expo 2020 Dubai, Mountain Education and Innovation Manifesto (MEIM) has been presented by the University of Milan—UNIMONT who is a member of the Mountain Partnership. This strategic document contains recommendations to promote sustainable development for the mountains and was a result of a study conducted by more than 100 young people coming from 28 countries around the world (Mountain Education and Innovation Manifesto, 2022). Türkiye is not included in any part of this study.

In the aforementioned manifesto, prominent education, discussion, and dialogue matters were defined as strategic issues which characterize life and sustainability in mountainous areas such as “climate change”, “biodiversity”, “virtual and physical mobility”, and “entrepreneurship and innovation”. There have been two online meetings in September 2021 and the final version of the official document has been presented in the Expo 2020 held in Dubai under the headline “Uniting Youth and Mountains, Creating a Vibrant Future”. The idea of the manifesto was born out of the belief that education plays a vital role in providing people with the means to building a vibrant future in the mountainous regions. Therefore, MEIM aims to support policy makers and education representatives around the world to develop policies, curricula and school programs in line with the needs expressed by young people living in mountain regions. In fact, when the spatial relations with youth and education are analyzed it is seen that a significant part of the universities in the member states of European countries are located on the mountains. 60%, 38%, 29%, 29% and 27% respectively for Greece, Austria, Portugal, Italy and Spain (European Commission contract No. 2002, 2004: vii). There are no accessible research articles or data regarding this subject in Türkiye.

As mentioned above, although throughout the years Türkiye has concentrated academically and administratively on planning rural and agricultural activities,

the productivity results are not promising at all. The share of the agricultural sector in total employment in Türkiye continues to decline. The subject of this article is not the agricultural decline in Türkiye but it would be appropriate to give a few examples from recent years due to the topic's relevance. The share of agricultural employment, which decreased to 17% at the end of 2019 continued to decrease reaching 16.4% as of March 2020. In addition to this decline in percentage, we see the decrease in terms of employment within the agricultural industry as well. Agricultural employment was between 5 and 5.5 million between 2010 and 2017. This number decreased to 5.1 million by the end of 2019 and to 4.3 million in March 2020. The inflation rate of 2021 has been announced as 36.08% by TUIK. However the food industry which is a major part in worker's expenses is found to have much higher inflation rates. Annual inflation in July 2022 was found to be 79.60%. In 2021, the number of farmers in Türkiye was 511,723. According to official data, the number of registered farmers in Türkiye has decreased by 29% in the last 5 years and by 55% in the last 10 years. Agricultural areas have decreased by 5 percent in the last 10 years and by 12 percent in the last 19 years (Euronews, 2021). Although various factors such as the Ukrainian war and COVID-19 are claimed to be the reason of rises in prices and declines in amounts, the root cause lies in the past. Türkiye has been supplying its food needs from foreign countries such as Ukraine and Russia and the war caused the public to notice our outer dependency. It is important that the development steps of the administration in terms of agriculture create positive results regarding "food security".

Returning back to Action Plan for Rural Development (2015-2018), the main principles to be followed are defined as continuity, collaboration, inclusiveness, participation, institutionalization, complementation, productivity, innovation, localness, subsidiarity, green approach and governance. Action Plan for Rural Development basically aims for the integration of basic rural development activities carried out by central administration and local institutions and common monitoring-assessment systems. This will enable the strengthening of corporate capacity and network of collaboration and coordination among all public organizations and institutions. While it is aimed to increase the rural economy and employment opportunities through these strategic articles, a relationship between irrigation and rural mountainous areas has been established in the Article 2 mentioned below.

The actions stated in Article 2.2.1 on Measures to Improve Irrigation Infrastructure which is a part of Improvement of Rural Environment and Ensuring the Sustainability of Natural Resources mention "mountainous rural areas". The measure no.14 states that "small scale ponds and irrigation systems to be built especially in mountainous rural areas will be improved and extended". Sustainability of forest resources has been defined as the priority and relations between income-generating activities and social development and environment related issues for "forest villagers" (Measure no. 22) have been formed.

However, it would be appropriate to include and specify “rural mountainous areas” according to their location when creating action plans. In the preparation of the “Disaster Master Plans” for the measure no. 3.7, to ensure safe settlement conditions to combat Natural Disasters coded 3.1.7, it will be wise to detect the villages under the threat of floods, avalanches, landslides and rockfalls based on their location and categorize them as the “mountain villages”. It should be noted that non-governmental organizations cannot benefit from European Union projects since the word “mountain” is not used administratively.

The list of priorities no. 5.2 on Strengthening Incentives on Rural Development focuses on creation and implementation of rural development strategies in the light of partnership among public and non-public stakeholders in its measure no. 5.2.1 and the first action towards that end is the sustainable development of villages located in mountain regions and forests (Measure no. 10). The actions pertaining to the Measure No.10 to be taken in various cities starting from 2015 until 2018 are stated as follows: “The definition of mountainous regions done in the IPARD Program should also be taken into account while carrying out integrated development projects in order to solve the disadvantages faced by the mountain people caused by the climate and topography of mountainous regions.” The steps to “implement the agricultural development activities in disadvantaged rural areas” include support and investment efforts to complement the current applications for organization, development of marketing and fortifying family farms (such as organic weighted berry cultivation, free range poultry husbandry, protected agriculture, certification, harvest, processing, packaging and warehousing) with pilot projects in mountainous areas, especially in disadvantaged settlements. The criteria used to define the relevant cities are important. In addition to paying attention to economic principles, it is very important to take into account legal and illegal external migrations and to study socio-cultural reciprocities.

It has been mentioned above that the definition of mountainous area criteria is not included in official documents in Türkiye. Mountainous regions in Pre-accession Assistance-Rural Development Program (IPARD-2007-2013) are defined as the areas higher than 1000 meters of altitude or with an altitude of 500 - 1000 meters and a slope of more than 17%. Undoubtedly, this approach in itself is worthy of appreciation, as it highlights mountainous areas and does not overshadow them with definitions of forest.

The measure 5.2.3 on Creating the National Cooperation Network for Rural Development mentioned the actions for “Revision of Rural Area Definitions”. These actions talk about “defining the rural areas incrementally and depending on their distance to city center and other suitable parameters and these definitions will not be affected by the changes in the local administration structure hence becoming the basis of statistical data formation”.

The works to be carried out in terms of Measure no. 18 based on “creating the village inventory information system” will also use the previous village invento-

ries. The inventories should differentiate between “mountain village” and “forest village”. The works will also focus on the gradual classification of villages in cities and districts based on their populations, demographics, migration percentages, geographical, environmental, social and economic structures and institutional and physical infrastructures. Essentially the List of Mountainous Areas of 500 - 1000 Meters (Slope of 17%) and the List of Mountainous Areas Above 1000 Meters have been published. In the list of villages that are located on 500 - 1000 meters altitude with a slope of more than 17% include 800 villages. And the mountainous areas with an altitude above 1000 meters encompass close to 5800 villages. However, this document was not accessible when this article was being written.

While implementing the Action Plan for Rural Development, it will be appropriate to get in touch with non-governmental organizations, especially those interested in mountainous areas, and to benefit from their governance philosophy coming from their expertise.

On December 11, 2019, the International Mountain Day workshop was held in Izmir with the participation of 135 people around 8 tables. The resulting results are generally shown below ([The Workshop on the International Mountain Day](#)).

When the list of strengths, weaknesses, opportunities and threats is examined, threats and weaknesses sometimes tangle up and the multitude of problems confirms why there is a need for mountainous area administration. The author especially thanks the Governorship of Izmir for the workshop on Mountain Area Administration.

4. Mountainous Area and Society 5.0 Workshop and Some Highlights

Different climatic features cause mountains to have rich biodiversity with vast flora and fauna. Mountains are rich in terms of cultural heritage and natural assets; Mountain regions can turn into settlement areas with the conditions presented by the climate change; Building nature-adaptive buildings; Mountainous areas have turned into attractive spaces in the eyes of many industries due to the fact that urban areas are being filled up; There is a possibility in switching to smart municipalities for overcoming the geographical challenges in terms of urbanism;

Early warning systems for natural disasters on mountains and in mountainous areas are becoming prominent; There are suitable alternatives to be used for the building materials (non-combustible or hard-to-burn) used in the construction industry to adopt to the needs of the mountain regions.

Insufficient information and inventory of aquatic plants (flora) and animals (fauna) in mountainous areas; The ease of access to natural habitats and uncontrolled entries to these areas; The use of the natural areas cannot be monitored with the help of technology or through classical methods of observations; Land

degradation due to disasters; The inhabitants of the mountains sell their agricultural lands to foreigners and citizens for obtaining a secondary housing; Locals of the mountains intentionally cause fires to open up spaces for construction that could create income and profit, thus harming the ecosystem.

The optimal capacity of mountains has not yet been defined by municipalities; Land erosion due to constructions; Caves do not have any inventories; Mining activities cause environmental problems; animal grazing and forest flora is decreased in special forest areas; Communication and alert systems are insufficient; Natural and social resources that have high economic value are used in an inefficient and insensible manner (such as stone and marble quarries); basic services are not enough or non-existent in mountain villages or neighborhoods in mountainous areas; The assessment of risk levels regarding the problems is hard; The status of pasture areas of many villages have been switched to other types causing the animal husbandry and agricultural activities to regress; Lack of staff; Insufficient local and agricultural organizations; Manufacturers not being able to sell their products for the prices that they want to sell them at; Irregular, arbitrary and unplanned settlements on mountains and in mountainous areas.

Risks to be caused by unplanned safety risk ranking and optimum population capacity for popular mountains that have touristic potential; Security problems arisen by terrorist activities³; Negative effects of climate change on mountain ecosystems; Locals have rightful reactions to the areas of which the landscape has been disrupted but the administrative authorities do not take these reactions seriously; Failure to comply with the law regarding mountain regions; Migrations from mountain regions to cities.

Building dams and the increasing number of hydroelectric power plants; Environmental Impact Assessments (EIA) and Integrated EIA for Wind Energy Plants and Hydroelectric Plants in mountainous areas are not being conducted; Strategic Environmental Assessments are not being conducted for risk and crisis analyses in mountain regions; EIAs are only based on investments; basis of studies conducted due to lack of a common definition for mountainous areas; Producers in the mountain regions are not trained in a multifaceted way (health, agricultural production, public education, marketing, and etc.); Sustainable strategic plans related to mountain tourism are insufficient or non-existent; Economic activities on mountains have reduced or stopped due to migrations; Lack of income and low levels of socio-economic wealth becomes triggering factors; Security problems due to geographical properties of mountains; Lack of law enforcement officials.

Lack of data and information regarding mountainous areas; Insufficient information about the special forestation conditions and credit options offered by the Ministry of Agriculture and Forestry; Not protecting the local architecture;

³For the example of Afghanistan regarding the problems arising from the mistakes of the public administration and the phenomenon of terrorism, see: [Yusufzada & Xia \(2019\)](#) Public Administration in Afghanistan: Challenges and Way Forward, *Open Journal of Social Sciences*, 7, 142-160.

Construction being made against the official construction plans; Special protection areas, national parks, and etc. are not administered successfully in mountain regions; Inability to manage the overuse and exploitation of natural and human resources; Locals living in mountainous areas cannot form a force of pressure against unnecessary public investments on mountains such as HES; Metropolitan municipalities remaining insufficient when it comes to planning mountainous areas because the municipal development plans of a 1/25,000 and 1/1000 scale do not take mountainous areas into consideration.

Administrative judicial authorities do not show the diligent care necessary on the implementation of decisions related to the protection of environment and rural areas; Original zoning law for mountainous areas and settlements on mountains is still not on the political agenda; Municipalities do not have plans regarding construction and public work in rural and mountainous areas; Endemic plants and animals face risk of extinction due to human-induced disasters such as fires; Structures built without license as hobby gardens disrupt the ecological balance; Losses and damages caused by lack of efficient mountain administration, incoherent legal regulations or loopholes cannot be prevented; Weak inspection mechanism in mountain regions; Inability to set an integrated administration among institutions inhibit coordination and efficiency; Forest fire towers on mountains or in mountainous areas have shortcomings; It is permitted to build roads, sets, picnic areas that are not in harmony with nature in mountains which have great touristic potential.

The planning legislation regarding the mountainous regions are not in line with current climatic conditions brought by the day and the geography of mountain regions; Organization in terms of communication, health, logistics, and etc. in cases of major disasters are insufficient; The disaster administration plans of cities are not properly announced to public; It is not known whether the disaster administration plans of cities encompass mountainous areas.

Türkiye is facing the threats of climate change (drought, desertification); Mountains can have seismic belts underneath and the size of tools and machines such as buckets and diggers are not suitable for use in mountains; For selected mountains, it is obligatory to plan the prevention of all kinds of security risks (population, risk maps and etc.); There are dormant volcanoes and these could get affected by strong explosions, constructions of dams and earthquakes; Türkiye is on a seismic belt and the increase in zoning permits and constructions poses a threat of damage for mountains; Unauthorized entries into forests; Illegal construction next to the riverbeds makes these areas susceptible to disasters; The fact that Türkiye is a country where natural disasters due to meteorological and tectonic reasons occur very frequently but the importance of this fact is not taken seriously.

Mountains are being open to construction without completing the Strategic Environmental Assessments; Lack of social responsibility projects; Environmentally and agriculturally negative effects of wind turbines.

4.1. Weaknesses in Terms of Disabled Individuals

Young people do not want to live in rural and mountainous areas due to the impracticality of living conditions; The first failure of young people causes them to feel less motivated to work; The education level is not where it is desired to be; Brain drain taking its toll; Limited housing opportunities in mountainous areas; Conservative social structure that is not open to foreigners in mountainous areas; Social insensitivities against disabled people; Disabled people cannot participate in social life on their own; Disabled people feel cast out of society; The provisions of the Convention on the Rights of Persons with Disabilities is not properly implemented; Productive population leaves the agricultural areas and they are directed to move to industrial areas of cities; The productive capability of rural areas decrease and employment problems arise; Disadvantaged groups are marginalized and they cannot express themselves; Implementations regarding increasing the life quality of disadvantaged groups are insufficient; People with visual or physical disabilities cannot use transportation services on their own; Insufficient staff in health services industry; Social prejudice against disabled people has decreased but it still lingers; Transportation problems; routes within neighborhoods are insufficient; Financial disadvantages due to the status of neighborhood; Insufficient or non-existent visuals or materials for warning or presenting about mountainous regions; Economic recessions; Challenges of transportation based education systems; Lack of technological opportunities and inability to utilize the existing ones; Increasing number of migration to cities due to limited employment options in mountainous regions.

4.2. Threats in Terms of Disabled Individuals

The possibility of young people harming the rural and mountainous areas due to their inexperienced entrepreneurial attempts; Natural disasters disrupt the transportation opportunities and increases the number of obstacles (for everyone); Disabled people are disadvantageous in cases of disaster administration; Lack of empathy for disabled people; Insufficient organizational plans for disabled people; Lack of coordination regarding disabled people; Insufficiencies in terms of increasing the life quality of disabled people; Increasing population of unemployed and disabled people; Employment problems; Low socio-economic standards negatively affect disabled people; Population living in mountainous area is composed of old people; Young population and families that are inactive in rural areas migrate to cities.

When the issues are considered as a whole, the weaknesses and threats are numerous and multifaceted. These issues also make it important and urgent to build an effective mountain administration planning on regional and national scales. This planning should be supported by organizations that could offer sectoral data and information. In order to create such plans, we should first define the features related to mountains and then commissions should be formed to help out. These commissions should first be built on a regional basis.

5. Conclusion

Humankind should first design the spatial environment that they live in. This principle should be considered hand in hand with the necessity to form an effective planning and public policy for mountain administration in Türkiye. However, unfortunately, even the word “mountain” is not clearly included in Turkish public policies and official development documents. Only the resources on and below the ground are mentioned in relevant statements.

Mountain regions are not included in spatial analyses. Mountainous area administration should not be hidden as minor chapter under a certain book name but it should be made visible as an individual and separate subject matter studied as one of the objectives of development of a sustainable society. It is high time to create multifaceted mountain policies within the basic public policies since mountain administration has become an obligatory factor of multifaceted safety administrations. This obligation should also be viewed under the light of climate change effects and having the essential resources for economic development. “Food, water and landscape” have always been seen in relation to mountainous regions and now we should look at the deeper meanings of these words and analyze their relationship with the concept of resilience and its place within the ecosystem administration.

Due to the features of mountains there is an ever-increasing international interest for this topic as well. 11 December has been celebrated as the “International Mountain Day” since 2003. The ecological strength related to the existence of natural resources also means the resilience of societies against all kinds of threats, especially climate changes. The world now evaluates countries not only in terms of the goods and resources they have but also with how they can manage these resources. There are even advanced imperialist discourses such as “the resource you cannot manage is not yours” (Amartya Sen, 1998). It is important to take into account the provocative side of this assessment, which has a dual meaning, and highlight it in terms of creating public benefit. The author is concerned that the damage caused by disasters without distinguishing whether a country is developed or underdeveloped could result in many European countries returning back to their old habit of developing through colonization (Karaman, 2021).

It is important that public administration takes important steps for making mountain administration unique by separating it from rural activities. Public policies on mountain and mountainous areas administration should be established rapidly in Türkiye. The idea of relaxing nature and cities by gathering people in giant structures does not apply to mountainous areas. Whether it is giant buildings such as hospitals or residential expansion in mountainous areas, it has a similar disruptive effect on mountains. In order to achieve the protection-use balance, it is important to develop interdisciplinary scientific design strategies, to objectively analyze and interpret them, and to demonstrate the ability to come up with new structures in accordance with the conditions of the

day. Marking the date of December 11 on calendars as the “International Mountain Day” is also an important detail that will ensure awareness around the importance of mountains.

Sustainable use of resources below and above the ground actually means multifaceted safety of mountains and mountainous areas and this highlights the importance of harmony in terms of human/population, nature and technology/economy. In the political agenda, the creation of a narrow perspective based only on “mountains and terror” for many years has in a way been rejected. Developments in the activities of “digital society” which means smart society alongside with climate change creates a space for questioning the administration of mountainous areas.

The European Union approach, rather than focusing on the definition of mountains, produces policies that will eliminate the lack of access to services and the deprivation in a less populated area and that will make development sustainable. Since the late 1980s, a number of documents mention that various policy elements have been proposed for mountainous areas in Europe and the purpose of these elements was to recognize the great diversity that characterizes mountainous areas at all scales. Although there are natural, economic and socio-cultural barriers, they are not the same at all locations. What is same is the need to protect natural areas and to not see them as places to be economically exploited. We should ensure these areas do not turn into abandoned places. Such guiding behavior should be prioritized and emphasized among member states of the European Union. The issue of sharing information and cooperation also has a value in terms of ethics.

It is important to establish supreme boards that allow participatory governance dealing with mountainous areas. There should be representatives of all ministries in that city along with non-governmental organizations; academic experts and non-expert but informed people of that local area. Once a regional commission is formed this commission should send representatives to a national advisory council which has public, private and civil stakeholders that work with a system based on an efficient and participatory mechanism. Pilot regions should be created to implement the “mountainous region administration” models taking selected mountains and its surroundings into consideration. These implementations should also be supported by academic studies and there ought to be separate funding for encouraging such studies both on a local and a central level. This mechanism should also be open to international cooperation.

There are many municipal associations in Türkiye, such as coastal and historical cities’ municipal associations, which have been established with a focus on the ad-hoc subject. However, a union structure such as “municipal unions of mountainous areas” is not permanently established. The author recommends the establishment of a “mountainous area municipalities union” that monitors the multifaceted development in mountainous areas through governance and reconciliation between human resources and nature.

Since 2004, in the context of climate changes, the economic problems caused by them, and endemic diseases such as COVID-19 have led countries into building relations based on their own interests. Therefore, it is important not to deviate from the guidance of international organizations and the principle of protection of common global interests. For this reason, especially with the rise of waters triggered by climate changes, the author believes that Türkiye should quickly make a special administration planning for its mountainous areas, starting from the specific pilot regions and also taking the climate migration into account.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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