

Uluslararası Sosyal Araştırmalar Dergisi / The Journal of International Social Research Cilt: 10 Sayı: 53 Yıl: 2017 Volume: 10 Issue: 53 Year: 2017 www.sosyalarastirmalar.com Issn: 1307-9581 http://dx.doi.org/10.17719/jisr.20175334140

CREATING PEACE PARK BETWEEN TURKEY AND GEORGIA

Sahar POUYA[•] Başak DEMIREŞ ÖZKUL**

Abstract

Political borders have been associated with various ecological issues such as biodiversity reduction and landscape fragmentation. The subject of border land conservation has been focusing on these problems. The concept of "Peace Park" or "Transboundary Conservation Area" (TBCA) falls under this subject heading. Turkey shares a large valley known as Machakhela, with Georgia. The valley has a unique ecosystem, with precious biodiversity and rich historical and cultural values. This area is covered by various management strategies by the two bordering countries. Even though the idea of cooperation between Turkey and Georgia for the protection of the valley has been discussed for a long time, there is limited research on the subject and a thorough evaluation has not been performed. This article explores the creation of an international peace park that spans the borders of the two countries. It analyzes the current situation based on available reports and documentation. Biological, socio-economic and planning topics are considered for both Turkey and Georgia. The paper discusses the challenges for the valley's management as a Trans Boundary Conservation Area (TBCA) and the potential benefits that it may provide for both countries.

Keywords: Peace Park, Political border, Conservation, Planning.

1. INTRODUCTION

Political borders have been associated with a large number of environmental issues, as most international borders are delineated by barriers. Human activities such as road construction and land filling across borders have caused landscape and ecosystem fragmentation and biodiversity and habitat reduction (Cunningham, 2012, 373-382; Pouya and Taheri, 2017; 50-250). In these situations, in order to facilitate wildlife movement and mitigate environmental issues, it is suggested that the border obstacles are removed as a solution. The idea of Transboundary Conservation Areas (TBCA's), also known as Peace Parks, was introduced following the World Parks Congress in 2003.

According to the International Union for Conservation of Nature (IUCN), a Transboundary Conservation Area (TBCA) is "an area of land or sea that straddles one or more borders between states or subnational units, whose different sections are especially dedicated to the protection of biological diversity, and of natural and associated cultural resources, and managed cooperatively through legal or other effective means". The first TBCA was established in 1932 between Glacier National Park in the USA and Waterton Lakes National Park in Canada (Mayoral-Phillips, 2002; Cumming, 1999; 12-54). By the late 1990's, 136 PAs, adjoining 112 international boundaries in 98 countries were created (Ali, 2007; 30-250). In addition to TBCA's, two other types of transboundary areas; Transfrontier Conservation Areas and International Peace Parks, have been classified. These have different definitions and objectives (Singh, 1999; 80-120).

Transboundary PAs are mostly categorized based on their location. These categories fall into two groups; terrestrial and marine conservation areas. Waterton-Glacier International Peace Park, The Great Limpopo Transfrontier Park, "W" Transborder Parks, Kavango - Zambezi Transfrontier Conservation Area are examples for terrestrial conservation areas. Whereas Binational Red Sea Marine Peace Park, Iona – Skeleton Coast Transfrontier Conservation Area, and Mnazi Bay-Ruvuma Estuary Marine Park are examples of marine conservation areas (Portman, 2007, Davis, 2008; 1-6).

[•] Department of Urban and Regional Planning, Faculty of Architecture, Istanbul Technical University (Corresponding author e-mail: Pouya@itu.edu.tr)

^{**} Assist. Prof. Dr., Department of Urban and Regional Planning, Faculty of Architecture



Peace Parks also provide opportunities to improve the nations', countries', and communities' relationships by involving them in the conservation and managements of cross border lands. The creation of these parks benefits other participants as well (Cunningham, 2012, Laverty, 2007; 72-96, Ali, 2007).

This article aims to investigate the cooperation between Turkey and Georgia by a transboundary park. Since early 2000th, World Wild Fund for Nature develops concept for establishing Georgia-Turkey cross-transboundary cooperation for sustainable resource use and biodiversity conservation. From Georgian side, Machakhela river valley (Machakhel in Turkish) is considered as the key area for development of transboundary activities. Machakhela is a small river that crosses border of Turkey and Georgia. The river's upper part is located in Turkey which is known as Jamili and middle and lower part of the river is in Georgia. The valley is valuable not only in biodiversity, but in view of culture and history (CBC, 2012). Even though idea of international cooperation and participation of two countries in order to conserve the area overt the political border has been discussed for a few, however, no survey and assessment has been performed about the possibility of the idea. This article makes attempt to analyze the management and planning strategies of two counties considered for the valley in order to create a transboundary peace park.

2. Materials And Method

The area which is analyzed as a potential Transboundary Peace Park in this research is a large valley with three main landscape forms: forest, mountain, and human settlements located across the international border of Turkey and Georgia (figure 1). This area falls to the Northeast of Turkey and Southwest of Georgia. The Turkish section of the site is called Jamili and the Georgian section is called Machakhela. To analyze the current situation of each section, three main factors are considered: their biological identity, the main socio-economic characteristics and planning perspectives. The data and information is gathered through a document analysis. The final section of the paper looks at possible planning alternatives to integrate and manage the area as a whole under an International Transboundary Peace Park.



Figure 1. Location of the site between Georgia and Turkey

2.1 Jamili Watershed Area/ Turkey

The Turkish section of the site is situated 25-30 kilometers from Georgia. It has been one of the oldest harbors conquered many times throughout history in the Black Sea. Since 1925, Jamili has been included in Artvin Province of Turkey. There are six villages having both official Turkish names and unofficial Georgian names in the area. In 2005, Jamili considered as the Turkey's biosphere reserve by ENESCO (Pirselimopglu et.al, 2008; 30-31).

2.1.1. Biological assessment of Jamili

The Machakhela (Jamili) river basin covers an area of 27,000 ha, and is situated on the eastern edge of the Black Sea. The region consists of Caucasian mixed temperate rain forests, high alpine meadows and the Karcal Mountains. The river basin is rich in biodiversity and endemic species (990 types of plants and 23 endemic species). Karcal Mountains with its main peak (3415 metres high) and its neighboring peaks encloses the river basin on three sides. There are three main valleys; the Ugur-Maral, Efeler and Duzenli valley. The Ugur and Efeler stream have various supporting branches passing through the valleys. The land has a very steep land structure with various altitudes (from 400-500 m to 3500 m). The forests in the area have mainly kept their natural characteristics (Teksoz et al, 2016; 10-54).



Wildlife is very rich in Jamili. It includes the highest diversity of mammals in Turkey such as wolf, fox, deer, lynx, otter and smaller mammals (Gokturk et al, 2011) and diverse bird species. It is considered a significant part of the global bird migration route. The area also contains a diverse selection of insects including bees. (Pirselimoglu et.al, 2008).

Socio-economic assessment

There are 6 villages (16.000 has; 1018 people (2017 census)) named Kayalar (pop: 72), Jamili (pop: 166), Efeler (pop: 171), Düzenli (pop: 209), Maral (pop: 226) and Uğur (pop: 174). Numerous archaeological sites can be found within Jamili, for instance, the Iremit mosque in Maral village, and Tamara's cave and an arched bridge at the entrance of Efeler village. Altogether, each village located within Jamili illustrates noticible architectural qualities. The area is frequented by tourists who come for trekking and sightseeing activities,

The natural conditions of the area; harsh climate, land structure, and dense plants have limited the economic use of the sources in the area. The roads have until recently been mostly blocked by snow during the winter because of the geographical conditions of Jamili (Pirselimoglu et.al, 2008) which continues to put pressure for the development of infrastructure projects in the area. Thus, income resources in the area are mostly farming and agriculture (mainly hazelnut production), tourism, bee-keeping and honey production. The organic honey produced in the region has been granted a local certificate through the Jamili Biosphere Reserve Local Agricultural Product Certification Project and the villagers have been given the patent to use the Jamili Biosphere name and logo in their products (Ertürk, 2018)

Cultural, ethnographic and historical values which the local population have produced for centuries (language, folklore, clothing, hand-crafts, songs, cuisine, authentic production systems) in the area are precious values that have significance for the people living in Turkey and Georgia. Eco-tourism has provided a new source of income for the villagers, who had been migrating to larger settlements to look for economic opportunities. Although eco-tourism has not stopped the migration from villages, it has provided a solution for unemployment and underemployment. (Aydın and Türker, 2010). Through small grants, accommodation in traditional dwellings has been developed and in 2017, 450 guests can be accommodated in the area overnight.

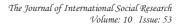
2.1.2. Planning approaches

Two main projects have been developed for the area: the "Biological Diversity Area Project" supported by the World Bank and "Jamili and Karagol Forest Ecosystem Protection and Development Opportunities Project" by The Research Association of Rural Environment and Forestry (RAREF). With the help of these studies, decisions for the protection of the area were made and Jamili-Gorgit (Heba High Plateau) and Jamili-Efeler (Findik High Plateau) Nature Conservation Areas (NCA) have been established. However, since 2005, the whole Jamili area (the section in Turkey) has been registered as a Biosphere Reserve (the only Biosphere Reserve in Turkey) by UNESCO (UNESCO, 2017).

Jamili Biosphere Reserve

The Jamili biosphere reserve area between the Black Sea and the high mountains beyond, with a surface area of 25,222 ha has borders with Georgia. It has a mild and humid climate with a subtropical oceanic character (Inandık, 1969). The villages and natural reserve areas of Jamili-Efeler and Jamili-Gorgit have been registered as one of the 20 Ecologic Regions by World Wide Fund for Nature (Figure 2). The rich seasonal precipitation in the area is drained by Efeler, Uğur and Düzenli rivers (Kaymaz, 2012; 25-70; Ozsahin & Kaymaz, 2013; 128-130).

The organizations responsible for the management plan are the Republic of Turkey, the Ministry of Environment and Forestry, Biological Diversity and Natural Resource Management Project, Jamili Project Management, and the General Directorate of Nature Conservation and National Parks (UNESCO, 2017). The forests are under the authority of the Directorate of Forestry and the Two Nature Reserves are managed by the Directorate of National Parks. Since 2004, Turkish citizens have permision to visit the site. In 2013 the number of visitors has reached 30,000. The requirement for a permit to visit the area and the difficulty to reach the area have limited the ecotourism activities and kept the ecosytem intact (IUCN, 2007).



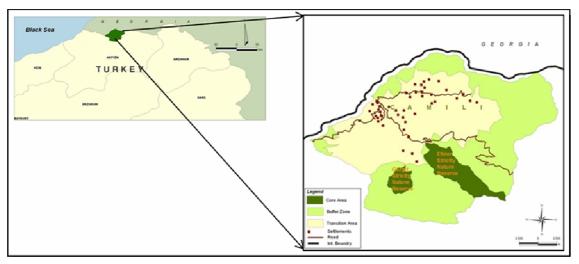


Figure 2. Jamili Biosphere Reserve defined by UNESCO (2005); Surface area (terrestrial): 22,222 ha , Core areas: 1943.5 ha , Buffer areas : 13,225 ha , Transition ares: 10,053.5 ha.

2.2 Machakhela/ Georgia

Georgia is in the southwest of the Caucasus region and includes a large portion of the region's biodiversity. The Caucasus ecosystem and it habitats include a large number of globally threatened species (WFF, 2011). Machakhela valley is located in the south of Adjara/Georgia across the border with Turkey close to the existing Mtirala National Park and Kintrishi Nature Protected Landscape (Figure 3). Machakhela is part of the Ecoregional Conservation Plan for the Caucasus.



Figure 3. Machakhela is located in the south of the Adjara

2.2.1. Biological assessmnet of Machakhela

Machakhela valley has an area of 10,868 ha and contains precious varieties of endemic plants.

Machakhela River is a small trans-boundary river between Georgia and Turkey. Machakhela includes two types of landscapes: secondary fields (orchards, residential areas) and deciduous forests with evergreen sub-forests. 75 % of the territory is covered with virgin forests and mostly with the Colchis forest communities (UNDP, 2016).

Around 200 species of vertebrates' mammals, birds (Imperial Eagle, Lesser Spotted Eagle, Steppe Buzzard, Black Kite) amphibians, reptiles and fish are found in the valley. Colchic forests provide an important habitat for large mammals, including European roe deer, brown bear, golden jackal, European lynx, wild boar, and wolf. Cultural and invasive vegetation cover anthropogenic landscapes, while Colchian species grow in forests reserved for their wilderness and landscape (UNDP, 2015).

2.1.2. Socio-esconomic assessment

In the area, old traditions such as cultural and historical heritage including the medieval Tskhemlari Bridge, the Gvara Fortress (6th-7th century AD), various churches and monasteries, and other ethnographic



attractions such as an old wine press are well preserved. Popular ceremonies and celebrations are also part of the cultural activities in Machakhela region. The popular Machackala Festival is held in the second half of September (APA, 2017).

Eight villages are located in the area and many of the local inhabitants maintain their own farm. Local agricultural production also creates tourisim attraction.

Like Jamili, Machakhela has specific geographic and climatic conditions. A large portion of the site is mountainous. The lack of agricultural land does not allow for the development of large-scale farming. Therefore, small farming is present. The industrial sectors are related to local produce such as tea factories, inert material factories and building blocks manufacturing (Gvakharia, 2011; 2-205).

2.2.3. Planning Approaches

Georgia's biodiversity is threatened by unsustainable logging of forests, over-grazing of pastures, poaching of wildlife, the cultivation of wetlands, inappropriate development, mining and quarrying, and mass tourism. Georgia's main strategy for biodiversity conservation is to develop a network of Protected Areas (PAs).

The National Biodiversity Strategy and Action Plan with regard to PA Development has been considered by Georgia's government since 2005, and the Eco-regional Conservation Plan for the Caucasus has served as a guiding document. However, there are weaknesses in the policy framework especially related to the integration of environmental protection with national policies and the lack of effective communication between ministries related to natural resources management (WWF, 2011).

The two PA projects in the Machakhela including Mtirala National Park (35,000 ha; 20,000 ha of which are covered by forest), and Kintrishi PA (18,890 ha) are two important conservation areas in the Lesser Caucasus. Machakhela National Park (established in 2015) joins on the south with the Jamili Biosphere Reserve in Turkey (APA, 2017). The establishment of Machakhela PA has consolidated the network of PAs in the region and filled the gap in the ecosystem. Furthermore, Machakhela National Park provides an opportunity for transboundary cooperation with the potential to better protect the area and foster a more integrated management for the larger ecological region (Figure 4).



Figure 4. Machakhela Valley crossed the border of Turkey and Georgia and links to the Jamili Watershed Area

-Machakhela National Park

Machakhela National Park was established in 2015 with a total area of 7,359.44 ha. The park is located in the gorge of the Machakhela River in the Adjara Region of Georgia. It supports the ecological corridor between the PAs of south-west Georgia in particular, Mtirala National Park and Kintrishi State Reserve and the PA of north-east Turkey in particular, the Jamili Biospheric Reserve (figure 5) (UNDP, 2016).



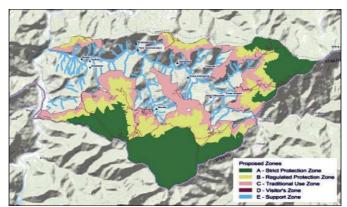


Figure 5. Machakhela NP Zoning Map according to the Law on Protected Areas by Global Environmental Facility (2015).

Regarding the Adjara PA as a potential for tourism development, it has been important to address issues like the governance and participation of different administration levels, local communities, private sectors in decision-making and issues related to the sharing of revenue (UNDP, 2016).

Objectives in Machakhela National Park in Georgia include;

-Conservation and protection of unique ecosystems;

-Tourism development;

-Creation of an ecological corridor between the protected areas of south-west Georgia and protected areas of north-east Turkey

-Improve socio-economic conditions for local community

-Promoting transboundary cooperation _ linking the Machakhela national park with the adjacent protected areas in Turkey.

Jamili (the part in Turkish territory) has been defined as the biosphere reserve by IUCN that covers two Nature Reserves inside the area. While the part of Machaekhela Valley located in Georgia with the same ecological and natural characteristics as Jamili has another management plan. The mainland of this part has been considered as a protected area that should be complete the NPs network in Ajara region of Georgia besides two other National Parks existing in the area. Based on Table 1 (Tablo 1), each category of Biosphere Reserve and National park considers some specific objectives defined by IUCN. National parks and other kinds of protected natural areas are primarily concerned with conservation; however biosphere reserve aims to do research and sustainable development as well.

Table 1. The definitions and aims of Nature Park and Biosphere Reserve according to IUCN categories.

Categories	Definition (IUCN)	Primary Objectives (IUCN)		
Biosphere Reserve	A larger area of land that may cover multiple National Parks and reserves.			
	It may also include the entire buffer and tourism zones and offers protection to not only the wildlife and flora but to the indigenous people as well.	To conserve genetic resources, species, and ecosystems. -To do scientific research and monitoring. -To promote sustainable development in communities of the surrounding region.		
	Some controlled economic activities will be permitted in these areas - like mining and farming. flora but to the indigenous people as well.			
	Some controlled economic activities will be permitted in these areas - like mining and farming.			
National park	It protects large-scale ecological processes, along with species and ecosystems protection.	-To protect natural biodiversity along with its ecological structure, -To support environmental processes, -To promote education and recreation.		
	It also provides a foundation for environmentally and culturally educational, recreational and visitor opportunities.			



3. Results And Discussion

Machakhela valley is a large natural area where ecological and cultural qualities are truly valuable. This area is under threat from incompatible management and conservation policies within its various sections, as the area crosses the political border of Turkey and Georgia. Analyses of the two sections provides and overview of their existing potentials and problems that are summarized in Table 2.

Table 2. Summary of the Jamili and Machekhela's characteristics based on their values and limitations.	
--	--

Part	Values	Limitations
Jamili (Turkish Part)	 Unique biodiversity and rich wildlife (carnivore species, endemic Caucasian species) Various landscapes of rain forests, meadow and mountain Rich water sources Traditional and rural lifestyle Numerous archaeological sites and historical monuments Ethnographic values and authentic production systems Specific architecture of wooden houses 	 Cold and harsh winter Limited income resources No permission for various activities Inappropriate roads and inadequate transportation
Machakhela (Georgian Part)	 Caucasus region's biodiversity Precious flora (Colchian species) Cultural landscape of farming Pristine nature and majestic landscape Festivals and popular programs Anthropogenic landscapes Possibility of doing industrial activities besides agricultural production 	 Lack of land for farming Unsustainable land use (logging of forests, over- grazing of pastures, cultivation of wetlands) Poaching of wildlife -mass tourism -limited economy

Machakhela National Park shares its south border with the Turkish Jamili Biosphere Reserve. After recognizing the need for transboundary conservation by international organizations such as the United Nations Development Program (UNDP) and International Union for Conservation of Nature (IUCN, 2013), the idea of establishing transboundary PAs has been considered (UNDP, 2016).

The management system of Jamili should be open and adaptable to the community concerns; and the local circumstances. Jamili management strategy in Turkey favours protection more and focuses less on tourism opportunities. However, the Machakhella National Park in Georgia is more known for its touristic opportunities.

By considering the Machakhela Valley that covers the whole area including the villages, the Karcal Mountains, Jamili Biosphere Reserve, Machakhela National Park as an international peace park between Turkey and Geogria, some issues as to both areas within the two countries can be alleviated. Some potential achievements in creating a Transboundary Protected Area (or an International Peace Park) would be:

- to harmonize natural resource management approaches to enhance ecosystem integrity and ecological processes and facilitate wildlife migration;

- to foster the management of biological and cultural resources and encourage social and economic partnerships to promote investment for preservation activities;

- to consolidate trans-national collaboration and co-operation in implementing ecological and cultural resource management;

- to promote tourism and eco-tourism by removing borders;

- to develop strategies such as ecotourism that local communities can benefit from

- to share knowledge of ecological and socioeconomic dynamics of the area through educational activities

Six main phases are suggested for establishing such a park in the area.

Phase 1 is to analyze; natural assets, climate, topography, ecological systems and natural resource areas (wild life, vegetation, water surfaces) and geology and landscape assessment; cultural heritage; socio-cultural and economic factors, population characteristics, cultural heritage, migration, local participation, tourism, settlement characteristics, infrastructure; agriculture systems, carrying capacity, residents' perception and



preferences; environmental quality problems, institutional structures, existing plan and policies, legal framework.

Phase 2 is to determine the formulation of the planning approaches such as environment -sustainable development approach carrying capacity, community participation approach- effective participation of the affected community in the planning process and a flexible approach that emphasizes constant observation and feedback to do the necessary improvements.

Phase 3 is to produce plans and suggestions related to the management plan,

Phase 4 is zoning the area and define special protection (strictly and semi protected) areas as well as multi-purpose protection areas for tourism and recreation like cross border festivals.

Phase 5 is to integrate monitoring the implementation of the plans

Phase 6 is to observe and deliver feedback.

4. Conclusion

Cooperative environmental management is a complex process that incorporates various factors. Similarly, creating a common conservation area between nations increases cultural and environmental factors and extends the time expected for the intended results due to the necessity of cooperative management by the two nations. In the case of Turkey and Georgia, the main issue is not just the conservation approaches, but the cultural and economic challenges. The residents living in the villages should be considered as priorities of the cooperation. The local people are the main factors in place identity and their expectations should be incorporated in the plans. The economic and cultural interaction of the village residents located in both countries can improve the economy through local trade and protect the traditional life styles of the residents by complementing each other through their differences and consolidating their similarities.

REFERENCES

ALI, Saleem Hassan (Ed.), (2007). "Peace Parks: Conservation and conflict resolution"24-300. Cambridge, MA: MIT Press.

APA (2017). Machakhela National Park, In http://apa.gov.ge (Accessed: 27 Jun 2017).

CBC (2012). Ecoregional Conservation Plan for the Caucasus, in http://wwf.panda.org (Accessed: 15 Jun 2017).

CUNNINGHAM, Hilary (2012). Creating Peace Park, In Permeability's, Ecology and Geopolitical Boundarie, Blackwell Publishing Ltd, chapter 21. pp 372-384/ A

- DAVIS, John. B. (2008). "Marine Peace Parks: Establishing Transboundary MPAs to Improve International Relations and Conservation", International News and Analysis on Marine Protected Areas, Vol. 9, No. 94. CUMMING, David HM (1999). "Study on the development of transboundary natural resource management areas in Southern Africa; environmental context:
- natural resources, land use, and conservation", No. 333.720967 C971, Biodiversity Support Program, Washington, DC (EUA). GVAKHARIA, Vakhtang (2011). "Environmental and Social Impact Assessment Report", Achar Energy 2007 Ltd. In Project on Construction and Operation of HPP Cascades on the river Chorokhi, 1-205, Tbilisi, Georgia.

INANDIK, Hamit (1969). Bitkiler Coğrafyası, İstanbul: İstanbul Üniversitesi Coğrafya Enstitüsü Yayınları.

IUCN (2007). "Governance of Camili (Macahel) Biosphere Reserve Turkey", Biological diversity and natural resources management process in Mail. https://cmsdata.iucn.org/(Accessed: 10 September 2017).

KAYMAZ, Çağlar. Kıvanç (2012). Camili (Macahel)'nin Coğrafi Etüdü (ARTVİN-BORÇKA), Yayınlanmamış Yüksek Lisans Tezi, Erzurum: Atatürk Üniversitesi Sosyal Bilimler Enstitüsü Coğrafya Anabilim Dalı.

LAVERTY, Melina F., GIBBS, P. Gibbes (2007). "Ecosystem Loss and Fragmentation, In Synthesis: Lessons in Conservation, Network of Conservation Educators and Practitioners, Center for Biodiversity and Conservation", American Museum of Natural History, Vol 1, pp. 72-96

MAYORAL-PHILLIPS, A.J. (2002). "Transboundary areas in Southern Africa: meeting the needs of conservation or development?", In The Commons in an Age of Globalization', Ninth Conference of the International Association for the Study of Common Property. Vol. 1721. Victoria Falls, Zimbabwe.

ÖZŞAHIN, Emre., KAYMAZ, Çağlar Kıvanç (2013). "Ecological Impact Assessment and Analysis of Camili (Macahel) Biosphere Reserve Area (Artvin, NE,

Turkey)", Global Advanced Research Journal of Geography and Regional Planning. Volume 2, Issue 6. pp. 121-138. PIRSELIMOPGLU, Zeynep., BAYRAMOGLU, Elif., OZDEMIR, Buket., DEMIREL, Oner (2008). "Nature Tourism Planning Process, A case Study; Camili (Borcka, Artvin) Watershed", In: 4th International Conference on Ecological Protection of The Planet Earth with an Environment Maritime Policeis and Energy Issues in The Black Sea, Jun 12-15, 30-31 Trabzon, Turkey.

POUYA, Sima, TAHERI, Mohammadreza (2017). Landscape Specialized English Texts, Shiraz: Ideh Derakhshan.

Teksoz, Gaye., Erturk, Erdoğan., Lise, Yıldıray (2016). "Biosphere Reserves for Education for Sustainable Development:Life in Camili Biosphere Reserve", In: Turkish National Commission for UNESCO, ANKARA.

http://www.undp.org/content/undp/en/home/procurement.html (Accessed: 30 Aguest 2017).

UNDP (2016). National Biodiversity Project: Expansion and Improvement Management in Mail, http://www.ge.undp.org/ (Accessed: 10 Aguest 2017).

WWF (2011). Eco-regional Nature Conservation Programme for the Southern Caucasus (ENCP) in Mail, http://wwf.panda.org (Accessed: 10 Jun 2017).

SINGH, Jaidev., (1999). "Study on the Development of Transboundary Natural Resource Management Areas in Southern Africa-Global Review: Lessons Learned", Biodiversity Support Program, Washington, D.C.

UNESCO (2017). Ecological Sciences for Sustainable Development, in http://www.unesco.org (Accessed: 27 May 2017). UNDP (2015). Provision of services for elaboration of Adjara protected areas system sustainable tourism development strategy and plan of action in Mail,