

Vjosa riverine environments: Approaching dynamic continuity

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Abstract

The Vjosa, a relatively well-known river of South East Europe, has been a subject of numerous attempts of infrastructural interventions such as the construction of hydropower plants for more than a decade. This “pearl” of the Blue Heart of Europe, as the river is often called by various activists, scientists and media, is now also referred to as a “dynamic equilibrium” and “geological continuum”. The article explores the dynamic and uneven character of the Vjosa, which is embodied in the lives of its people as much as their lives are spatialized in its riverine environments. While activists, scientists, and the media praise the Vjosa’s continuous dynamism, local people have an ambivalent relationship to it. On the one hand, they fear the Vjosa’s “wild” character, as it floods their fields and “eats up” their soil, whereas, on the other, they appreciate its vitality because it provides their fields with water and minerals. By delving into this ambiguous nature of the Vjosa, this article seeks to rethink the meaning of dynamics, continuity, stability, fixity, and rupture at the brink of the modern quest for control over changing environments. By intersecting different scales—social, geographical, hydrological, historical, political, and economic—it explores the mutuality of entanglements, disentanglements, and transformations that configure the Vjosa’s riverine environments. We argue that the dynamic, wild, and ambiguous nature of the Vjosa is part of the structural continuity or so-called “landscape structure” that seeks to resist the contemporary quest for fixity, stability, and control.

KEYWORDS: Vjosa River, riverine environments, dynamic continuity, landscape structure, Albania

Introduction

“Down there, the river has eaten up the land,” noted 68-year-old Ilir¹ from the small village of Qesarat, pointing at the spot where his pastureland suddenly drops steeply to the broad gravel bars of the Vjosa River. It was a sunny but relatively windy and chilly day in early March 2022 when Ilir and anthropologist Nataša² walked over his pastureland, which adjoins the agricultural fields where he had already planted corn, wheat, and other early-season vegetables. Like most villagers from Qesarat and the neighboring village of Iliras, Ilir grows such crops for his own use. Despite the breeze from the north, the early March sun was warming the air and the landscape. The surrounding mountain peaks glistened in the snow that had fallen a few days earlier, while it had rained in the lowlands. The snowfall considerably cooled the Vjosa, an alpine river rising in the Pindos Mountains in northern Greece that is turquoise blue due to the sandy silt coming from the tributary Sarandoporus. “Since 2000, the river here has eaten about five hectares of my land,” Ilir repeated, gazing at the site where the river’s current was gushing loudly along the eroded foot of the bank where his fields had once been. When Nataša approached the eroded site, Ilir warned her in a calm but slightly concerned voice, “Be careful, the river is *rrëmbyeshëm*” (it can carry you away / it is overwhelming / torrential).³ Looking at the turquoise current, he remarked, “It’s a wild [*lumi i egër*], but a good river,” and briefly added that the Vjosa not only takes away but also gives. In response to Nataša’s questioning look, he explained that because of its repeated floods, ever-changing flow, and voracious nature, it erodes the land, especially in winter, but at the same time irrigates it and the crops during the summer months, and assures their economic and social wellbeing. When asked to explain what exactly he means by the wild character of the river, Ilir briefly replied, “It’s like a fish. Which one is wilder? The one from the reservoir or the one from the river?” He waited for Nataša’s answer, and when he heard no response, he replied, “The fish from the river,” and smiled.

¹ To retain the anonymity of the interlocutors we use pseudonyms.

² This research was conceived as a classical anthropological study, combined in some phases with remote sensing (RS) methods and geographical analysis. Using an intersectional approach, the research team included geodesists and geographers, in addition to the anthropologist, who examined the intersections between the social, cultural, and geographic features of the Vjosa riverine environment. Geodesist Urša Kanjir and geographer Liza Stančič used remote sensing techniques to analyze changes in land use/land cover and gravel deposition areas (gravel bars) over a period of 40 years. This delicate intersection of big/remote data (Earth Observation data from Landsat satellite images) and thick/ethnographic data (local knowledge practices gathered during ethnographic fieldwork) has resulted in many figures and maps that are part of this discussion. For more details, see Kanjir et al. (2022a, b).

³ The adjective *rrëmbyeshëm* derives from the verb *rrëmbim* or adjective *rrëmbëshëm*, and can have both a positive and a negative connotation, depending on the context. For example, positive meaning: “*Rrëmbëshëm nga arti*”—“Overwhelmed (carried away) by art.” Negative meaning: “*Ujku e rrëmbujën delën*”—“The wolf grabbed the sheep and took it away.”

Ilir's explanation of the Vjosa's wildness and its *rrëmbyeshëm* (torrential) nature, opens up multiplicity of scales that generate the dynamic continuity of the Vjosa and its wider riverine environments. One of these scales pertains to people's ambiguous relationship with the river, from which locals seem to maintain a distance due to its voraciousness. During Nataša's fieldwork in the valley, which is one of Albania's agriculturally rich and productive areas, its inhabitants often did not speak directly about the river, but instead described their pastures, agricultural fields, olive groves, vineyards, irrigation canals, annual floods, the continuous erosion of their land, and the recent, more abrupt changes due to infrastructural interventions. The latter evokes the other scale addressed in Ilir's answer in which he also referred to the current infrastructural interventions on the Vjosa River, where the local government, in cooperation with transnational companies, had a plan to construct about eight hydropower plants (HPP) over the last decade.⁴ According to the hydrological estimates, the reservoir would inundate much of the agricultural land that stretches along the riverbed and belongs to Ilir and other inhabitants of the villages of Qesarat, Iliras, and Memaliaj. Upon becoming aware of this fact, Ilir and other residents of the villages, with the support of environmental activists, organized protests against the construction of the HPP in the neighboring village of Kalivaç. The main goal of these protests was to draw attention to the irrevocable changes this construction would cause to the whole riverine environment. The third scale to which Ilir's brief observation refers are the hydrological characteristics of the Vjosa River, which, according to locals as well as biologists, hydrologists, other scientists, and environmental activists, is considered one of the most dynamic rivers in Europe, excelling in terms of its wide gravel bars and rich biohabitat. This dynamic or, to use Ilir's word, wild character of the Vjosa River shapes local people's relationship with it, while their knowledge practices are spatialized by Vjosa riverine environments.

Against this backdrop, this article explores the dynamic and uneven character of the Vjosa, whose ever-changing nature is embodied in peoples' lives in the same way as their lives are spatialized in the riverine environment. By delving into the voracious yet benevolent nature of the river, this article seeks to rethink the meaning of dynamics, continuity, stability, fixity, and rupture that impinge on the modern quest for control over

⁴ In the course of the rush on the rivers of Southeast Europe, transnational companies, in cooperation with local governments, had been planning the construction of at least 42 hydropower plants on the Vjosa for several years, 34 of which were to be built on its tributaries and eight on its main course. Due to decades of appeals by national and international scientists, environmentalists, and non-governmental organizations such as EcoAlbania, RiverWatch, Euronatur, and Balkan River Defense, motivated by the irreversible changes this will cause to the river's ecosystem and local communities living near the riverbed, as well as the support of the European Council, the construction of the two hydropower plants was halted in 2020. Later, in June 2022, the memorandum between the Ministry of Tourism and Environment (Albania) and the outdoor company Patagonia annulled the construction plans as the Vjosa River will be declared a national park.

changing environments. Drawing on intersectional ecologies which apprehend the environment as “always in the process of becoming” (Vaughn et al., 2021, p. 277), a process made meaningful by different intersecting scales, this paper explores the mutuality of the entanglements, disentanglements, and transformations (Tsing et al., 2019) involving humans and non-humans that contribute to the making of Vjosa riverine environments. Indeed, these environments are “gathering in the making” to borrow Anna L. Tsing’s (2017) concept, being made and re-made in the intersection of different scales and temporalities.

In the following pages we open the text with the subjective (personal) and objective (hydrological) encounters with the Vjosa River that make up its dynamics and its ever-changing nature. We then take the reader through a brief overview of some of the anthropological studies of rivers around the world that are relevant to this discussion, highlighting the importance of dynamics and statics, continuity and rupture in their relationship to “landscape structure” (cf. Tsing et al., 2019). In doing so, we try to follow different yet entangled scales of dynamics and statics stipulated by the *scientific knowledge of and local knowledge practices lived beside*⁵ the Vjosa. Different scales of this dynamic continuity are measured through the scientific studies of the river and its hydrology, and experienced through the cultivation of agricultural lands, pastures, and olive groves by local people. All these different, seemingly incommensurable scales are emplaced in the history of the Vjosa riverine environments which have generated the so-called “landscape structure.” The latter is constantly transfigured through the dynamics of the Vjosa, due to the contemporary infrastructural interventions of various national and transnational companies into its course in the contemporary quest for control and predictability.

Encountering the Vjosa

Our first encounter with the Vjosa River took place in late March 2016 at its mouth into the Adriatic Sea. This encounter, which was part of a joint field trip,⁶ soon turned into an expedition in which our group of five researchers almost lost its way in the sandy land-

⁵ Although scientific knowledge and the local knowledge practices of the Vjosa River and its wider environment are interrelated in many ways, in this article we make a partial distinction between them. Namely, scientific knowledge is largely based on accountability (Strathern, 2000; Helmreich, 2009), scientific objectivity, and evidence-based arguments that primarily aim to define, measure, and make prognoses about the dynamics of the Vjosa’s riverine environments. In contrast, local knowledge practices, which are part of people’s daily lives and embedded in their way of dwelling, do not generally refer to accountability and evidence-based explanations of the dynamic environments of the Vjosa but, rather, are continuously attuned to the contingencies of everyday life. For more details on scientific knowledge, its production, and evolving epistemologies see Lambek (1993), Gusterson (1996), Rabinow (1996), Knorr Cetina (1999), Strathern (2000), O’Reilly (2016).

⁶ The joint field trip was part of the research project entitled “Ethnographies of Land and Water Routes” (J6-6839).

scape. Dragonflies, mosquitoes, butterflies, turtles, seagulls, and other vertebrates and invertebrates accompanied us to the Vjosa Delta, located a few kilometers north of the coastal town of Vlora. The rather hot late spring sun was high in the sky, warming the vast sandy landscape, its golden sand dunes and spiky beach grass making us feel far away from the river. “Where is the sound of the Vjosa’s current?” we wondered, looking at the Google map on our smartphones that was giving us an inaccurate position due to the poor mobile network. None of us had the feeling that we were in the vicinity of the mouth of the Vjosa, or in even a riverine environment. It was only after an hour’s walk that we saw the huge, murky stream flowing silently into the Adriatic Sea.



Figure 1: Vikos-Aoos National Park, a reservoir formed by the hydropower dam

The Vjosa flowed quietly and its gentle murmur was almost drowned out by loud bird-song and the sounds of starlings, croaking frogs, and the buzzing of dragonflies, mosquitoes, and other insects. Immersed in the sounds of the Vjosa riverine environment, we gradually absorbed its majesty (see also Petrović-Šteger, 2016b): a unique wetland of almost 20 hectares called the Vjosa Delta-Narta Lagoon. These typically Mediterranean wetlands are home to a variety of animal species and insects, and known for their deep vegetation and coastal dunes (Shumka et al., 2018).

But the wildness and grandeur of the Vjosa are not in evidence where it rises as the River Aoos at an altitude of 1,235 meters on the Piges-Aoos plateau in northern Greece. Its underground source in the village of Chrisovitsa and its subterranean flow to the Piges-Aoos plateau make it difficult to imagine the size of this transboundary alpine river in

its upper reaches, especially since the source of the Aaos is bounded by the HPP and the technical lake created after 1984 as a result of infrastructural intervention. From this reservoir on the Piges-Aaos plateau, the Aaos continues to flow in a north-westerly direction through the relatively mountainous terrain and forested slopes of the northern Pindos Mountains.

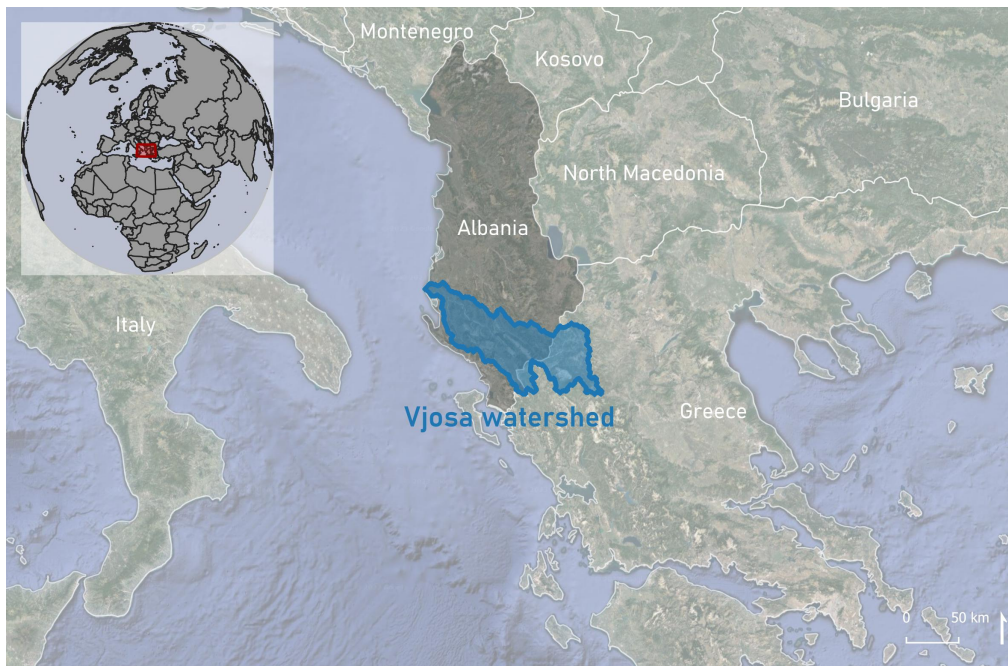


Figure 2:Vjosa River watershed (© ZRC SAZU, Liza Stančič, 2022)

Except at the border with Albania, where the Aaos flows through the small town of Konitsa, the rest of the landscape that stretches along the 80-kilometer-long Aaos (in Greece) is relatively uninhabited due to the proximity of the Vikos-Aaos National Park.

On Albanian territory, the river becomes the Vjosa, which, after 192 kilometers, flows into the Adriatic Sea. Its watershed covers almost 4,365 square kilometers of Albanian territory (Figure 2) and is known for its rich biodiversity and rare vegetation (Shumka et al., 2018); consequently, many scientists and environmental and other activists describe the Vjosa as “a highly dynamic but stable and continuous fresh water system” (Shumka et al., 2018, p. 351), which, due to being unbounded by HPPs on Albanian territory, is described by numerous scientists (biologists, hydrologists, geologists etc.) as being in “dynamic equilibrium”⁷ and one of the last still “intact” rivers in Europe (Schiemer et al., 2020; Sovinc, 2021).

⁷ Dynamic equilibrium is achieved when the capacity of sediment transport and its load do not cause abrupt changes in the erosion of the river bank, the gravel deposit, and its load (Vermont Agency of Natural Resources, 2005). It implies that the amount of sediment transport in a given river section remains relatively similar over the years (Julien, 2018).

The upper catchment, extending from the Greek-Albanian border to the Këlcyre Gorge, has relatively few meanders and a shallow but entrenched channel with a low gradient and little or no floodplain.



Figure 3: Middle catchment of the Vjosa River with complex flow patterns, predominantly branched and anastomosed streams

In the middle catchment the meandering of the Vjosa River increases and its gradient decreases (Daja et al., 2018). This part has complex flow patterns with predominantly branched and anastomosed streams. Due to its three main tributaries, the Sarandoporous, Drinos, and Shushica, this area is particularly characterized by a very high sediment supply and resulting erosion of the river banks (Figure 4).

High sediment transport from the tributaries enhances the formation of wide gravel bars⁸ which, in some areas (e.g., in a small town of Tepelena and village of Kutë in the southwestern part of Albania), extend to about two kilometers in width. They are important indicators of a river's morphological activities and crucial for maintaining the dynamic yet balanced functioning of its coastal and marine environment (Constantine et al., 2014; Sovinc, 2021).

⁸ Gravel bars are geomorphological features formed when enough material accumulates to reach above the surface, especially in areas where the river has reduced carrying capacity (Stančič, Oštir, & Kokalj, 2021). They play a role in numerous ecological functions and provide habitats for a variety of plants and animals. Thus the Vjosa is home to a number of endangered species, amongst which are 177 species listed in the Bern Convention (Graf et al., 2017).

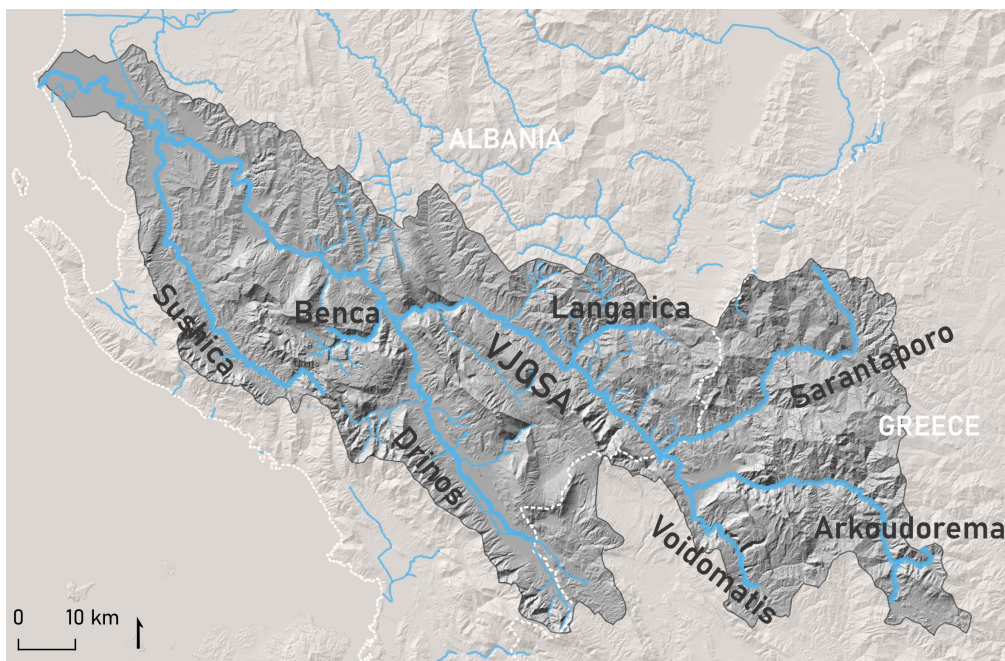


Figure 4: Vjosa River and its tributaries (© ZRC SAZU, Liza Stančič, 2022)

The river's dynamic features, characterized by profound morphological activities and biohabitats such as gravel bars, resonate with the local peoples' experiences of Vjosa as an ambiguous riverine environment. The question here is how to approach such an environment, where riverine and terrestrial are constantly (re)created through the multitude of entanglements, disentanglements, and transformations between different scales. But before addressing this question, let us present a brief overview of different anthropological approaches to understanding riverine environments, both as object and as subject of this study.

Rivers as the ethnographic subjects and objects

In general, there are more rivers separating region from region in our country [Albania] than mountain ranges, no matter how high they are. It can be observed that the contact and mutual influence between two populations far apart on the opposite sides of a mountain range are always stronger than between the populations inhabiting the opposite banks of rivers. Perhaps the lack of maneuverability on water is the cause of this phenomenon. As in most cases in our country, the course of the river separates two large units with individual ethnographic features in the Vjosa region, lying between the two sides of the basin, to the right and to the left of the river. These two units are distinguished by the people themselves, and they are called by the special generic names of Labëri and Toskëri: the

former on the left bank of the river Vjosa, the latter on the right bank that borders the sea. (Zojzi, [1950] 2020, p. 17, translated by authors)

With these sentences, an Albanian ethnologist, Rrok Zojzi ([1950] 2020), opens his monograph entitled “Vjosa Valley,” in which he pays tribute not only to the social and cultural features of the people inhabiting this valley but also to the physical characteristics of the Vjosa riverine environment (Bardhoshi, 2020, p. 16). To some degree, Zojzi’s study echoes some well-known classic anthropological studies of rivers across the globe (Murray & Ray, 1918; Hayes, 1906) that conceive of rivers as geographic markers or objects of study (Wagner & Jacka, 2018, p. 1). In the later pages of his ethnographic report Zojzi continues that in Labëria, due to the mountainous and alpine landscape where limestone cliffs predominate, people lived mainly from pasture and livestock, while in Toskëria, where the soil is largely clay, a strong agricultural tradition prevails (Zojzi, [1950] 2020, p. 18). Although Zojzi’s report focuses mostly on the social and cultural domain, his writings conceptualize the Vjosa as a geographic boundary dividing two regions, Labëria and Toskëria.

While there are few ethnographic studies on rivers in Albania, apart from those by Zojzi (1950) and Bardhoshi (2020), anthropological takes on rivers in other parts of Europe and the world in general have been in full swing since the 1950s. They employ different theoretical approaches and focus on different aspects, such as the role and meaning of rivers in agricultural activities and social and political organization (Steward, 1949); their relationship to infrastructures and governance (Wittfogel, 1957; Geertz, 1972; Barnes, 2014); their economics and commodification (Bakker, 2003; Strang, 2015, 2020; Wagner, 2012); climate and environmental changes (Hastrup, 2009; Hastrup & Skrydstrup, 2013; Orlove, 2009); environmental justice (Williams, 2001); human rights (Sultana & Loftus, 2012; Hossen, 2014); health issues (Whiteford & Whiteford, 2005); fish migration and aquatic environments (Swanson, 2017; Johnson, 2019); ethnographic subjects (Wagner & Jacka, 2018); chars or gravel bars and hybrid environments (Lahiri-Dutt & Samanta, 2013); river beings (Johnson, 2020; Strang, 2015); rivers as a “legal entity” (Salmond, 2014, 2018); their relation to mental landscapes (Petrović-Šteger, 2016a); moral ecology and care (Scaramelli, 2018, 2021); boating and dwelling on water (Bowles, Kaaristo & Rogelja Caf, 2019; Bowles, 2019); ecopopulism and growing environmental consciousness (Rajković, 2020; Kurtović, 2022).

Orlove and Canton attest that water permeates, trickles, or flows through many different realms of social life and is therefore often conceptualized as a “total social fact” (2010, p.

402). Inspired by the hydrosocial cycle (Linton & Budds, 2014),⁹ Franz Krause (2011; 2018) explores the hydrosocial character of the Kemi River in Finland and the Mackenzie Delta in Canada. In his early study of the Kemi River, Krause tries to approach its hydrosocial character through its flow, conceptualizing it as a “stream of life” (2018, p. 180). Later, in his research on the Mackenzie Delta, he explains how rivers, particularly deltas, should be grasped through their fluid and volatile character, which leads to the “uncertain dynamics of a world in movement” (Krause, 2021, p. 104). While Krause accentuates the uncertainty and volatility of river deltas, Bruun Jensen in his research on the Mekong attends to these dynamics as a potential space of transformation where the “amphibious gains new life” (2017, p. 224). Lahiri-Dutt and Samanta (2013), in their study of the Ganges/Bengali Delta in India, explore chars or gravel bars as temporary islands that are constantly changing and forming “hybrid environments” that are always in flux. Similarly, Catarina Scaramelli (2021) explores the fluid and shifting scales that make and unmake the Kızılırmak Delta in Turkey. She focuses on historical, geological, political, and social scales, noting that “fluidity is not merely a property of water and sediment flow, but it is expressed and shaped by people’s practices in a changing environment” (Scaramelli, 2021, p. 174). The Kızılırmak Delta should be considered in its multiple forms—storms, floods, dikes, wells, and pipes—which together with history and geology make up its environment.

As described in the introductory vignette of this article, people living near the Vjosa have an ambiguous relationship with the river, as its dynamic and ever-changing nature constantly shifts the boundaries between water and land. In Bruun Jensen’s sense, Vjosa’s riverine environments could encapsulate an “amphibious approach” in which water appears to “flow back onto the land” (2017, p. 224), giving rise to new emergencies in the form of gravel bars, eroded agricultural land, changing riverine environments, increased migration, and changing social organization. The constant changes and dynamics of the Vjosa’s riverine environments resonate with Ingold and Simonetti’s (2021) conceptual discussion of solid fluids, where the relationship between statics and dynamics is reversed and transgressed. Matter can be both solid and fluid, Ingold and Simonetti argue, for it can exist in constant flux, where its “structure depends on the manifold ways in which the continuum can be folded, stretched, twisted, spun, or otherwise contorted” (2021, p. 8).

⁹ Geographers Jamie Linton and Jessica Budds (2014) advance the physical concept of the hydrological cycle, which separates water and society, into a hydrological cycle that attends to water through its interrelation with society.



Figure 5: Vjosa Valley and the villages of Iliras, Qesarat, Kalivaç, Kutë and Poçem (© ZRC SAZU, Liza Stančič, 2022)

In line with the conceptual strands presented above we seek to explore Vjosa riverine dynamics that are made meaningful through different scales of knowledge and knowledge practices. Inspired by Anna L. Tsing and her definition of landscape¹⁰ we approach Vjosa riverine environments¹¹ as “gatherings in the making” (2017, p. 7). As Tsing (Tsing, 2017; Tsing et al., 2019) aptly points out, immersed in the cosmologies of their interlocutors, anthropologists often forget to look at the landscapes. Landscape is not just solely a geographical surface or geological substance, nor human experience, biohabitat, history, knowledge, or knowledge practices; rather it is an entanglement of all these realms which, together, continuously make up landscape structures—defined as “morphological patterns in which humans and nonhumans are arranged” (Tsing et al., 2019, p. 188). They are, in part, human and non-human histories, which have shaped landscapes since their origins and are “signs of landscape-making” and “show history rather than oppose it” (Tsing et al., 2019, p. S188). Departing from this we explore how different bodies of

¹⁰ We define the term environment as similar to Tsing’s (2017) landscape, but since the inhabitants of the Vjosa Valley mainly use the term environment (*mjedisi*) in their daily parlance, we mostly use the latter term when referring to the locals’ relationship with the river, farmlands, and landscape in general. The term landscape (*pejzhazh*), is a relatively new word derived from the Roman word for landscape and is used in the Albanian language primarily to refer to the “naturalist view” (Tilley, 1994, p. 23) of the landscape as an aesthetic and “neutral backdrop to activity” (ibid.). Although we use landscape and environment interchangeably in this article, we refer to landscape primarily when discussing Tsing, Mathews, and Bubandt’s notion of “landscape structure” (2019) or when referring to riparian landscape.

¹¹ In a similar way, but employing different theoretical strands, Ingold defines environment as never complete as it is “forged through the activities of living beings” (Ingold, 2001, p. 20).

knowledge, knowledge practices, and experiences related to the River Vjosa throughout history form the landscape structure that is experienced, studied, reconfigured and mapped as a dynamic continuity.

Dynamic continuity: Between knowledge and experience

Let us return to the banks of the Vjosa, to the village of Kutë, known for the wide gravel bars that stretch beside the agricultural land. The proximity of the river has always been of central importance to the locals, who have based their economic and social activities on agriculture and pastoralism.

But according to the plans underway for the construction of eight HPPs on the Vjosa River set in motion in 2015, these agricultural plots in Kutë would be, as noted above, flooded by the reservoir formed by the HPP dam planned at the neighboring village of Poçem. The villages of Qesarat, Iliras, and Memaliaj faced a similar fate, as another HPP in the neighboring village of Kalivaç has been under construction since 2007.¹²

For this reason local and foreign NGOs—EcoAlbania and RiverWatch—under the umbrella of the transnational campaign “Save the Blue Heart of Europe,”¹³ initiated numerous research activities or so-called “science weeks” and other artistic and media-oriented events. In this way, they aimed to raise awareness among the local people and the general public in Albania of the irreversible changes that the construction of the HPPs would bring about to the morphology, the riparian landscape, and the local population. As they write in one of their publications and on their website:

[The HPPs would] destroy Europe’s last intact wild river system. This would lead to a severe loss of biodiversity and affect all ecosystem services, such as natural water purification, vast groundwater reserves for drinking water supply and agriculture, flood protection, and unique opportunities for recreational development (EcoAlbania, n.d.).

During the six years of the anthropological research of the Vjosa River, Nataša had the opportunity to participate in some of these “science weeks” as well as in other events

¹² In 1997, the Albanian government granted permission for the construction of the HPP in Kalivaç. The construction started in 2007, but was paused due to various problems with the investors. In 2017, the Albanian Ministry of Energy and Industry awarded the concession to new entrepreneurs, the Albanian-Turkish joint venture Fusha sh. p. k. and the Turkish Ayen Enerji.

¹³ The Blue Heart of Europe campaign aims to protect the riverine environments throughout the Balkans, where various transnational cooperative enterprises, together with local politicians, are planning around 3,000 HPPs on various rivers flowing through Slovenia, Croatia, Bosnia and Herzegovina, Serbia, Montenegro, Macedonia, Kosovo, Albania, and Greece (Balkan Rivers, 2018).

(Gregorič Bon, 2021). One of them was the Vjosa Science Week, which took place between 23rd and 29th April 2017¹⁴, with more than 30 scientists (mainly biologists, hydrologists, and geologists) from Albania, Austria, and Germany conducting research in the middle catchment of the Vjosa basin, around the village of Kutë.

This was the first international joint field research project to target the area, whose opening event was held in one of the guesthouses and cafeterias of the relatively remote village of Kutë. On this April evening, the rather small guesthouse was crowded with scholars and journalists who had travelled from various places in Europe, as well as some locals from Kutë village, all gathered to explore the “intactness” and “wildness” of the Vjosa. The event was inaugurated by one of the initiators of the Science Week, a biologist, who pointed out that the Vjosa is one of the rare rivers in Europe whose catchment area in Albania is—at present—without major technical interventions and thus stands for “dynamic equilibrium” and a “geomorphological continuum.” According to him, the ecological functions and specific biodiversity of the Vjosa floodplain ecosystems are highly dependent on their intact geomorphological dynamics, making the Vjosa, as one of his colleagues and co-organizers later put it, the “Blue Heart of Europe.” During this period—indeed, until 8th August 2022—the Vjosa, along with many other Southeastern European rivers (about 3,000), was at risk from planned HPP dams. The pioneering international project included an assessment of the geomorphology of the river and its floodplains, habitat turnover rates, vegetation ecology, and the biodiversity of major aquatic and terrestrial faunal groups, as well as many other issues.

The results of this scientific week were published in various popular, expert, and scientific publications, all of which praised the Vjosa for its dynamic nature, biodiversity, rich biohabitat, wilderness, and pristine nature, making it the “pearl” of the blue heart of Europe. In this sense, for example, one of the environmental NGOs writes:

Despite the lack of extended studies, due to variety of natural habitats this part of the country creates the possibility of an *ecological continuance* giving shelter to a rich biodiversity. Dimension, complexity and integrity of river habitats along the Vjosa are unique within Europe. The braided river system is characterized by

¹⁴ This pioneering Science Week on the Vjosa River was significant because the scientific results served as the evidence base on which the rich biohabitat and dynamic equilibrium of the Vjosa River were confirmed. This served as the basis for a lawsuit filed by the local communities of the Vjosa Valley and the NGOs (EcoAlbania, RiversWatch and Euronatur) against the Albanian Ministry of the Environment and Tourism and the real estate company that planned to build the HPPs in Poçem and Kalivaç. Based on this scientific evidence and other objectives, the local communities together with the NGOs won the lawsuit in 2019, which was later re-contested by the Albanian government. As mentioned in Footnote 3, due to broad international and EU support, especially the NGO campaign Blue Heart of Europe, the construction was halted in 2020 and cancelled in 2022.

large gravel banks with pioneer vegetation, islands, side arms, oxbows, ponds, and alluvial forests of native vegetation that provides breeding ground for typical bird species. Despite major knowledge gaps in regard to biodiversity, the surveys were conducted show that the Vjosa is a *hotspot for biodiversity*. In only few days of survey there have been 40 species reported for the first time in Albania while 2 of them were completely new species for science (EcoAlbania, n.d., *our emphasis*).

The leading scientists from the University of Tirana and University of Vienna edited the Special Issue of the scientific journal *Acta ZooBot Austria* to present the results of their research on Vjosa (Schiemer et al., 2018). In their words:

Its [the Vjosa's] unique value is due to the widely undisturbed and maintained *fluvial dynamics* throughout its course, from the headwaters in Greece (Aoos) to the delta in southern Albania (Vjosa). The ecological functions and specific biodiversity of river-floodplain ecosystems are highly dependent on their *intact geomorphic dynamics*.... with its widely unobstructed fluvial morphology over the entire river corridor, its longitudinal continuity in water flow and sediment transport processes from its headwaters to the Adriatic Sea, the Vjosa represents an important reference system for *dynamic floodplains* that have already been lost all across Central Europe.... Its gravel layers are frequently overtopped by overbank sands and silt, indicating the continued fluvial interaction in the *geomorphic continuum* of the river-floodplain system. (Schiemer et al., 2018, pp. 2, 22, *our emphasis*)

The Vjosa Science Week was very successful and mention of it made it to the pages of several international newspapers and magazines, which described the “iconic,” “intact,” “dynamic,” and “unique” nature of the Vjosa. Some months later The Guardian (UK newspaper) reported on the “Vjosa Science Week” with the following words:

One stonefly species, *Isoperla vjosae*, was only discovered on Albania's iconic Vjosa river this year, during an expedition by 25 scientists which also found an unnamed fish previously unknown to science.... The scientists' report described the Vjosa as a *remarkably unique and dynamic eco-haven* for scores of aquatic species that have disappeared across Europe. (Neslen, 2017, *our emphasis*)

But this “unique and dynamic eco-heaven” and the “hotspot of biodiversity,” often admired by biologists, environmentalists, activists, and journalists, echoes differently in the local knowledge and knowledge practices of Vjosa Valley inhabitants. In a conversa-

tion with elderly villagers in one of Kutë's village cafes, Nataša observed the hustle and bustle of journalists and cameramen from various parts of Europe who had come to document Vjosa Science Week. Kutë, known as a prosperous agricultural area during the communist regime (1945-1991), became a forgotten village on the Albanian map after the regime's collapse (Gregorič Bon, 2020), but received renewed attention that April week in 2017. This time, however, it was not because of agricultural cultivation, but because of its "intactness" and "biodiversity." While the interest of journalists, photographers, and scientists focused almost exclusively on the Vjosa River, the men¹⁵ who talked to the anthropologist Nataša that April morning barely mentioned it. Instead, they talked about the history of the village, and recalled important patrilineal lines (*fis*)¹⁶ after which individual neighborhoods in the village are named. They nostalgically remembered the days of the communist regime when the village flourished as one of the agriculturally productive areas in Albania because of its location by the Vjosa River. They proudly showed their agricultural fields and the irrigation canals that are part of the Vjosa's riparian landscape and the olive groves that rise above the hills surrounding the village. They praised their fields and their harvest, which is abundant almost every year thanks to the Vjosa. But at the same time, they also accentuated the Vjosa River's voraciousness in eating and eroding their land with its strong, *rrëmbyeshëm* flow. As Sajmir (around 50 years of age) explained, this happens mainly in winter when one of its currents moves to the southwestern bank, closer to the fields, floods them, and carries away their soil. But, despite this, Sajmir continued, proudly patting his colleague, sitting next to him, on the shoulder:

Bledi had 70 hectares of land where he grows wheat, for example. He is one of the biggest wheat producers in the village. Over the years, 10 hectares have been eaten up by the Vjosa. But he still has 60 hectares where he grows a lot of wheat.

Nataša's attempts to steer their conversation toward the role and meaning of the Vjosa in their lives led her interlocutors to be even more explicit about their terrestrial prac-

¹⁵ While in this article are presented only male interlocutors, we would like to note that during seven years of the anthropological research in the villages of the Vjosa Valley (mainly Përmet, Tepelena, Iliras, Qesarat, Kutë, Selenicë, and Armen), the anthropologist had the opportunity to speak with a number of female interlocutors. As will be explained in the following pages of this article, the locals' relationship with the Vjosa is mainly built through their interrelation with the riparian landscape, into which the agricultural land extends, owned primarily by male heirs of particular families and their patrilineal lines. Thus most of the observations about the plots of land and their relationship with the Vjosa were made by men. Certainly, this opens up an interesting debate about the seemingly gendered relationship with the river (if it can be called such), which is to some degree irrelevant in the context of the Vjosa Valley, as it is to the main argument of this article.

¹⁶ *Fis* consist of patrilineal descendants who share a common ancestor, surname and "same blood" (*gjak*). They usually own common lands, forests, and pastures. Especially in the past, most descendants of a particular patrilineage lived in separate households and houses (*shtëpi*) located in the same neighborhood, which was named after the surname of that patrilineage.

tices, agricultural plots, and amphibious nature (Bruun Jensen, 2017; Krause, 2018)—that is, the ever-changing interplay between river and land due to seasonal flooding, erosion, and silting. Like Sajmir and Ilir, many other villagers living along the Vjosa perceive the constant changes of its course and riparian landscape as part of their daily lives. Similarly, their way of living and farming the land is spatialized by the riverine environment (see Figure 7). As Sajmir explained, although the Vjosa has eaten up 10 hectares of Bledi's land, he still owns 60 hectares and remains the largest farmer in the village. In Ingold and Simonetti's (2021) conceptualizations, local people perceive the Vjosa as a solid fluid that they experience and live with through the riparian landscape. In contrast, scientists, activists, and the media approach the Vjosa primarily through its fluid characteristics, which are often objectified and solidified in scientific attempts to measure, pin down, and precisely define its dynamic nature. In order to follow the epistemological rigor of a particular scientific discipline, numerous attempts to evaluate and define the Vjosa's fluvial dynamics often inadvertently pause it, or, in Ingold and Simonetti's terms, turn it into a solid fluid.

The meaning of the Vjosa is thus situated in a constant interplay between solid and fluid, which means that its dynamic continuity is approached through different yet entangled scales—local, scientific, activist, and media—that generate different materialities. These are made and re-made through the riparian landscape, fluvial dynamics, water discharge, rare aquatic species, and local peoples' way of dwelling.

History of land and water management

Back to the banks of the Vjosa River again. But this time to the villages of Qesarat and Iliras on a cool and windy spring day in 2022. In addition to Ilir, the anthropologist spoke with many other villagers from Qesarat and neighboring Iliras. Among them was Ali, in his 60s, living in Iliras with his wife; his adult daughters are married and have migrated to Italy and Greece. He described the Vjosa as follows:

[I]t runs like a snake, and if you pay attention, it goes like a serpent as it runs downhill.... [H]e [the river; *lumi* is a masculine noun in Albanian] always eats the soil on his right arm. He has eaten the [agricultural] fields of the people of Iliras and Qesarat ... he eroded them, he took them away. He is always moving, for example, from the rapid floods of the river that comes out ... He curves here and there, like a snake when it crawls.

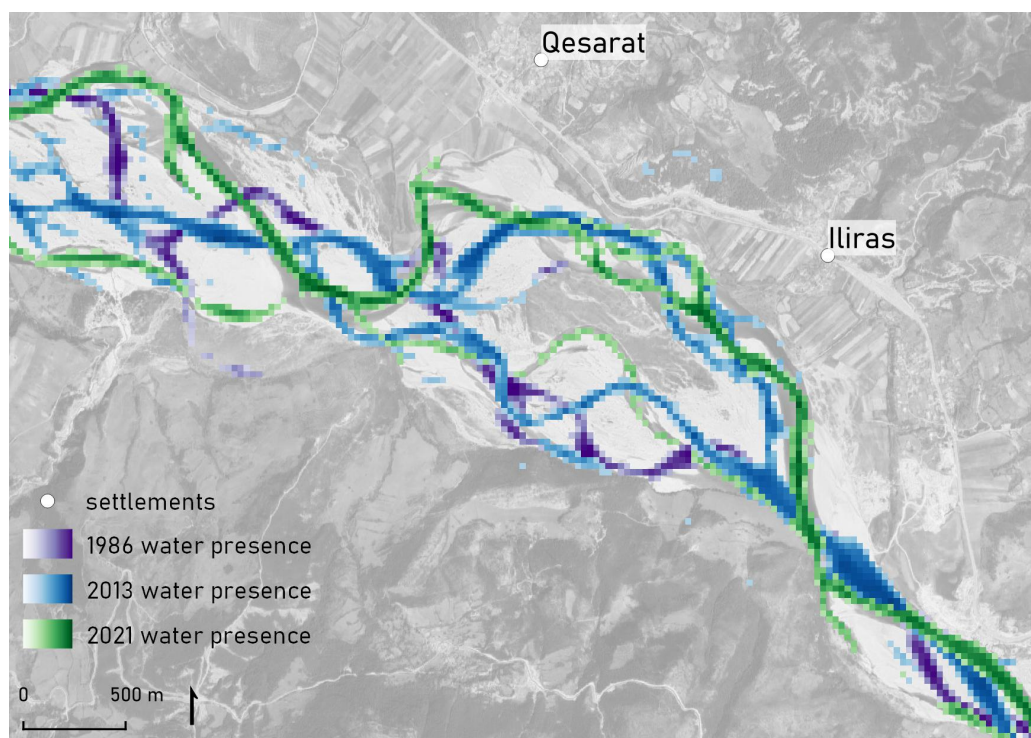


Figure 6: Changes in the river flow by the villages of Qesarat and Iliras between 1986 and 2021. This figure is a result of remote sensing analysis using multitemporal Landsat images.¹⁷ The image shows how some meanders of the Vjosa River have evolved over time, changing their curvature and moving both transversely and longitudinally between the years (violet, blue, and green) (© ZRC SAZU, Liza Stančič, 2022).

With these sentences, Ali's description of the voracious, "snake-like"¹⁸ nature of the Vjosa and its resemblance to a snake explains how its dynamics—as postulated by scientists—are lived and experienced by the locals. Namely, the scientific description of the Vjosa as a dynamic continuum (measured by water discharge, sediment transport, constant reshaping of gravel bars, changing meanders and seasonal bank erosion) and geological continuum (since it is an alpine river, characterized by both water discharge and sediment transported by its tributaries) resonates to some extent with the local knowledge practices in which the Vjosa is perceived and lived as a "winding," "snake-like" subject. According to the local knowledge practices this ever changing and ambiguous

¹⁷ This analysis was part of the ESA-funded project (ESA 4000130071/20/I-DT) entitled "Contextualization of EO data for a deeper understanding of river environment changes in Southeast Europe," led by Urša Kanjir.

¹⁸ Many local myths and legends are associated with rivers and other water bodies in Albania. As described by Gregorič Bon (2021), some Albanian myths and legends attest to a deep relationship with rivers. One of these is the legend of the serpent-like dragon Kuçedra, which lives in rivers and other water bodies and both protects and endangers people. According to legend, Kuçedra has an ambiguous character, for it can be both devastating—bringing floods, storms, or droughts—and benevolent and protective, irrigating the fields and bringing food and water to the people. Although it seems to be an almost forgotten mythological being in contemporary Albanian society, its authoritative character permeates peoples' relationship with rivers and other water bodies (Gregorič Bon, 2020, 2021). This could be somehow also read in Ali's brief comparison of the Vjosa to a serpent.

character gives the Vjosa authority¹⁹ because, on the one hand, people are in some ways afraid of its wild, *rrëmbyeshëm* nature, while on the other, they value its vitality in irrigating their fields and ensuring their economic well-being. Throughout history they have been mainly an agrarian and pastoral society, which means that they have only partially interfered with the course of the river by irrigating their fields and olive groves. Zojzi (1950) points out that with the exception of its delta, Vjosa was never used for transportation due to its shallow course, and the fishing tradition developed relatively late in its history.

The first inhabitants of the Vjosa area lived on the hills above the riverbed, where important prehistoric cities such as Byllis, Apolonia, and Amantia were founded between the sixth and second centuries BC (Zojzi, 1950; Chevalier et al., 2008). A similarly important historical significance was attributed to the Vjosa Valley during the Byzantine and later the Ottoman Empire, when the area was known for agriculture, pastoralism, and trading relations. Together with the tradition of pastoralism, these empires contributed significantly to the population dynamics (resettlements, internal and external migrations) that characterized and shaped this area over the centuries. As mentioned above, the communities that populated the Toskëria (right, northern river bank) and the Labëria (left, southern river bank) regions had little contact for many centuries (Zojzi, 1950), and this is still true today. Both were subject to numerous migrations within and outside the country, with the highest rates of population movement occurring at the beginning of the Ottoman Empire in the fifteenth century (Zojzi, 1950), during the interwar period, and after the collapse of the communist regime (1991). The only exception to this pattern was during the communist regime, when out-country migration was strictly forbidden (due to the country's isolationist policies) and in-country migration was directed and controlled. During this period, which has been described as one of the harshest and most draconian regimes in Europe (Vickers, 1999; de Waal, 2005; Schrapel et al., 2016), agrarian reform took place in 1958. Agricultural cooperatives were established in many villages, including those in the Vjosa Valley.

All this was often recalled by the inhabitants of the Vjosa Valley, especially those in the villages of Kutë, Qesarat, and Iliras. For example, the elderly men who talked to the anthropologists in late April 2017 in a local Kutë cafe recalled the time during the communist regime when many of them worked in the fields with the pioneer brigades, building

¹⁹ For a detailed discussion on the role and meaning of the Kuçedra myth, generated in political and media discourse, as well as in everyday discussions of water-related disasters such as floods and infrastructural management interventions, see Gregorič Bon (2021). The reference to the mythological figure in everyday parlance and media discourse continuously brings home the meanings and relationship to authority prevalent in the realms of culture, nature, and mythology (Gregorič Bon 2021).

irrigation canals, cutting back the Mediterranean shrubs along the river, and transforming the riparian landscape into an agriculturally productive area. One of them, seventy-year-old Fatjon, explained how they expanded the agricultural fields, which were no longer in the hands of individual patrilineal families but belonged to agricultural cooperatives and were collectivized by the communist regime. Fatjon also explained that because of the construction of the irrigation canals connecting the river to the land, they planted a number of sycamore trees on gravel bars to prevent soil erosion that could occur due to this form of river management.

The first decades after the collapse of the regime saw massive rural-urban migrations which stabilized somewhat in 2000 and increased again after 2008.²⁰ As several villagers in Kutë recount, many hectares of agricultural land were abandoned, irrigation canals became blocked, and other infrastructure—roads, water, and electricity networks—became dilapidated. Due to the Law on Land No. 7501, addressing the decollectivization and reinstatement of property, once collective farmland tended to be distributed among members of village cooperatives,²¹ which raised a number of issues with the “original owners” of the land (or particular patrilineal families) who had owned the land before the communist regime. Consequently, the privatization law is still a work in progress today, and many villagers do not have legal titles to their land. Furthermore, during the communist regime some inhabitants moved away while others were resettled in the village (for economic, political, and ethnic reasons, among others) by relocation programs directed by the communist government. Although today in the Vjosa Valley, especially in the villages of Kutë, Iliras and Qesarat, land is usually owned by male heirs of the family

²⁰ For more details on migration, see King and Vullnetari (2003); Vullnetari (2007); Gregorič Bon (2019).

²¹ After the fall of the communist regime, on July 19, 1991, the Albanian Parliament passed Law No. 7501 on the decollectivization of land. The law stipulated that land seized from private owners by the communist government and administered by agricultural production cooperatives should be divided equally among the former members of the cooperatives. This meant that each former member of a particular cooperative was to receive a portion of the land, the size depending on the total size of the land that formerly belonged to a particular agricultural cooperative. The ownership that existed before communism was nullified. One of the reasons was the collectivization of the land during the Ottoman Empire, when most of the inhabitants of the area of present-day Albania submitted to Islam, with the exception of the remote, mountainous settlements in northern Albania and the Orthodox minority areas in southern Albania, which retained their own religion or/and the Kanun laws, local autonomy and private land ownership in return for the payment of taxes. The second reason was the series of resettlements throughout the country, directed and managed by the communist leadership with the aim of reducing ethnic differences between certain ethnic groups in Albania and eradicating any kind of religious beliefs, the implementation of this law was rather unsuccessful. This meant that most of the agricultural property in most parts of Albania that belonged to the Ottoman Sultans (and later administered by *çiflik*) was re-collectivized by collective farms after the 1950s during the communist regime. Nevertheless, some patrilineal families who managed to stay in their area of origin (they were not resettled during the regime or did not migrate during the Ottoman domination or after the fall of the communist regime) built an even stronger relationship with the land and their property, which had been constantly insecure for centuries (Gregorič Bon, 2008).

(*familje*)²² that originally owned it before the communist regime, the number of so called “active” owners (who own and farm the land) has diminished due to the above-mentioned issues.

“Landscape structure”

The political, economic, and social changes that accompanied the contested law on privatization, the economic crisis, ensuing migrations, and gradual decrease of the “active” owners after the collapse of the communist regime has led to land fragmentation, which can be seen in Figure 7 below.

Figure 7 shows the history of land fragmentation and transformations in the Kutë village due to political, economic, and social changes between 1984 and 2021. The satellite image (Landsat) from 1984 shows the plots that were collectivized and put in the hands of the agricultural cooperatives during the communist regime. These were de-collectivized after the fall of the regime in 1991 and returned to their owners – either to the members of the cooperative in Kutë (some of whom were only relocated to the village during the regime) or to the “original” owners (patrilines) who owned the land before the regime (see the 1997 satellite image). In the following two decades, increased emigrations from the village led to a slight consolidation of certain plots of land (see the 2021 satellite image), which were left to members of the respective patrilines who remained in the village, while their relatives and co-owners migrated either to larger cities in Albania or abroad.

In terms of the work of Tsing et al. (2019), Figure 7 shows how the history of political (communist regime and collectivization of land, postcommunist regime, privatization, and migration), economic (agricultural cooperatives, today’s neoliberal economy, and resulting land sales), and social (recurrent out-migration and reduced “active” landowners farming the land) changes have (re)configured the landscape structure. Satellite images (Kanjir et al., 2022a, b) of the Kutë village over the past 37 years map how continuous entanglements (between politics, the economy, and society) and transformations (communist regime, postcommunist period, liberal democracy, land fragmentation) between these scales shape the Vjosa riverine environments as a gathering in the making (cf. Tsing, 2017). In other words, the dynamic and ever-changing nature of

²² According to Gregorič Bon (2008), the meaning of *familje* conjoins the house or household (*shtëpi*) with the name of the father’s lineage (*fis*). Particularly in the past but also nowadays, a child is considered to belong to his father’s *familje*. This ideally includes a married couple, their children, the husband’s parents, and his unmarried siblings. They live under one roof, sharing the meals prepared by the women, and the goods and the money earned by the working members of the *shtëpi* (house or household). When people of the Vjosa Valley discuss clusters of *familje* which share the same second name, they use the term *fis* (or rarely *çeta*).

Vjosa and its environment are not a singular and one-way process, but one involving multiple scales and temporalities that (re)configure the landscape structure.

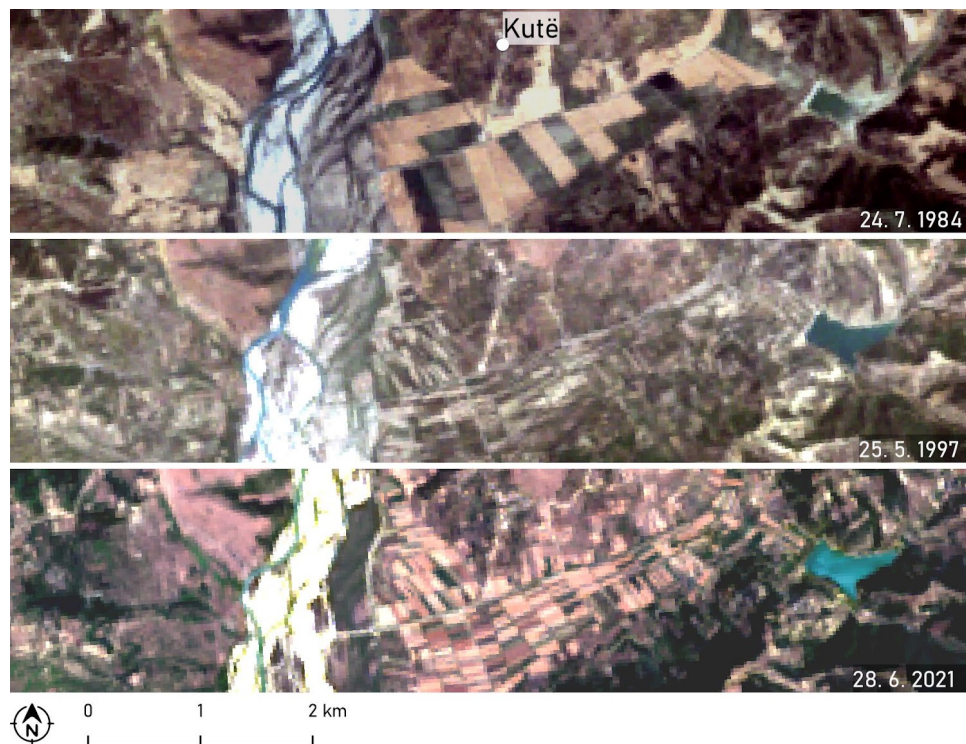


Figure 7: Land fragmentation in the village of Kutë over the last 37 years (1984, 1997, and 2021). This figure is one of the results of the intersectional research on Vjosa riverine environments, combining anthropology, remote sensing, and geography. It maps the land-tenure changes monitored through the series of Landsat satellite images analyzing land-cover changes over time, showing how the history of land cover is interrelated with political, economic, and social realms (© ZRC SAZU, Liza Stančič, 2022; Kanjir et al., 2022b).

To return to Nataša's conversation with the men held in one of the coffee-shops in Kutë during the Science Week in 2017: while the elderly inhabitants were mainly concerned with their fields, pastures and olive groves, and nostalgically recalling the communist era, the younger generation turned to the present. In this context, Fatmir and his colleagues (in their thirties) shared current problems, such as the migration that is salient in the area again and the problems that would arise if the HPP in Kalivaç were to be built and the reservoir flooded their fields. Fatmir, along with other villagers, pointed out that their land is the only wealth they have, apart from remittances from their migrant children abroad (Gregorič Bon, 2020). He framed his frustration with regard to the HPP in the following way:

Here [in Kutë] we have our property and our land where we grow wheat, corn, and other crops. We have our cattle, our homes, and our wealth. Why should we leave all this for the capitalist needs of some Turks [the dam was to be built by a Turkish construction company] or in the interests of Sali Berisha [the Albanian prime minister between 2005 and 2013] or Edi Rama [prime minister from 2013 until today]? Why should we give up our homes because of their interests? This is the place where we were born and this is the place where we will die and be buried. Just like our ancestors. This is where our *fis* [patriline] belongs. Here we have land, home, and wealth. I do not see why we should leave all that for a few kilowatts of electricity? We could be more productive in agriculture than we are now.

Iilir from Qesarat shared similar frustrations but at the same time an insurgent attitude on that chilly February day in 2022 when he showed the areas where the river has “eaten” the land and where fields would be flooded if the HPP was built. As one of the main local initiators of the protests against the construction of the HPP in Kalivaç that took place in 2016 and 2017, Iilir explained:

We protested because we do not want this land we own to become a lake [reservoir]. We have grown up with the land here (*Ne kemi rritur me tokën aty*). We have brought up our children on this land and therefore we have no other future [if the land is flooded by the HPP]. If you create a lake here, everything will die. Do you understand? The waste will come right up to our villages. The environment will collapse/die. That’s why we protested together with the Iliras and went to Kalivaç to stop the construction of the HPP. Here they [meaning the state] had a lot of interest. They did not ask us, the people.

The people’s relationship with the Vjosa—the hydrosociality (Krause, 2018)—is built through terrestrial practices such as agricultural activities and the associated irrigation canals, as well as pastoralism. Agricultural land, pastures, and home/house (*shtëpi*) are embroiled with the kinship system, family, identity, and feelings of home and belonging (Gregorič Bon, 2008, 2020). The meaning of land (*toka*), especially in rural areas, entails economic and social capital, as it is deeply embedded in the local peoples’ way of dwelling.²³ The local people experience and live with the Vjosa through their inalienable

²³ As explained by Gregorič Bon (2008), in many rural areas throughout Albania, people’s relationship to the land (*toka*), which includes both arable land, pasture land, and the home/house (*shtëpi*), not only pertains to economic realms but is also integral to individual kinship systems and social relations in general. In many villages of central and southern Albania, for example, certain neighborhoods (*llagja*) are named after the particular patriline (*fis*) who largely inhabits them. This is mainly due to rules of patrilineal residence. As detailed by Gregorič Bon (2008), the meaning of home/house (*shtëpi*) embeds both material (building) and social (kinship ties referred to as place of birth or origin and burial) meanings, which, as Gerda Dalipaj (2016) aptly notes, are closely intertwined with the burial place (*varri*) of each patriline (usually the deceased of a given patriline are buried in the same location). The interrelation between home/house (*shtëpi*), land, and place of burial (*varri*) is an important institution in Albanian society as a whole, with social, spatial, and temporal significance (for more details, see Dalipaj (2016); Dalakoglou (2010); and Gregorič Bon (2008)).

relationship with the land in which the present, past, and future generations of a particular family, *shtëpi*, and patriline are embedded. To employ Ingold and Simonetti's (2021) notion of solid fluid, people in the Vjosa Valley build their relationship with the river through its riparian landscape. The latter is due to its amphibious nature defined as a rich aquatic ecosystem, where the boundaries between solid and fluid, terrestrial and watery, are porous and continuously shifting and gradually reconfiguring the landscape structure of Vjosa riverine environments.

From continuity to discontinuity

As noted above, throughout history, the people inhabiting the Vjosa Valley have learned to live with their dynamic environments, which they have deeply embedded into their daily practices and way of dwelling. Due to the continuous dynamics of the Vjosa River and its ambiguous nature, the local people did not heavily manage the riparian landscape until the communist regime, when the agricultural cooperatives expanded the land plots and built the irrigation canals. But, as described above, these interventions were ameliorated due to strategies of preventing soil erosion (e.g., planting trees on gravel bars and riverbanks) that were already present in the region. However, this type of management collapsed with the fall of the regime, which was accompanied by the return of massive out-migration. Together with the political, economic, and social crises in the country, there was a strong deforestation of the riverbanks—either for personal use or for the market. Other infrastructural interventions also took place during these years, such as gravel mining for construction purposes, which flourished after 1991, and the construction of roads and HPPs after 2015.

All these changes have ruptured the continuous dynamics of the Vjosa course, which seems to have become increasingly discontinuous and disturbed in the last decade due to the infrastructural interventions mentioned above. In line with this, Durim from Iliras clearly pointed out where “the river has eaten up the [agricultural] land.” He explained that the erosion has accelerated in recent decades, due to the gravel mining that took place in 2015 when an Albanian construction company built a new road to replace the old road which would be flooded due to the construction of the HPP in Kalivaç. In addition to the gravel mining, the construction company cut down the poplars which had spread along the river bank and prevented excessive erosion. Since then, the course of the river has shifted enormously, accelerating the erosion of the farmland they own. Despite this, many residents from Iliras, Qesarat, and other villages in the Vjosa Valley have to pay taxes on land that no longer actually exists. According to Durim, 10 dylims

(or 1 hectare) of land costs 2,500 leks or €20.50. This is a relatively high amount considering that most people in this area are unemployed or receive a monthly salary of €200-300 or a pension of €100-200.

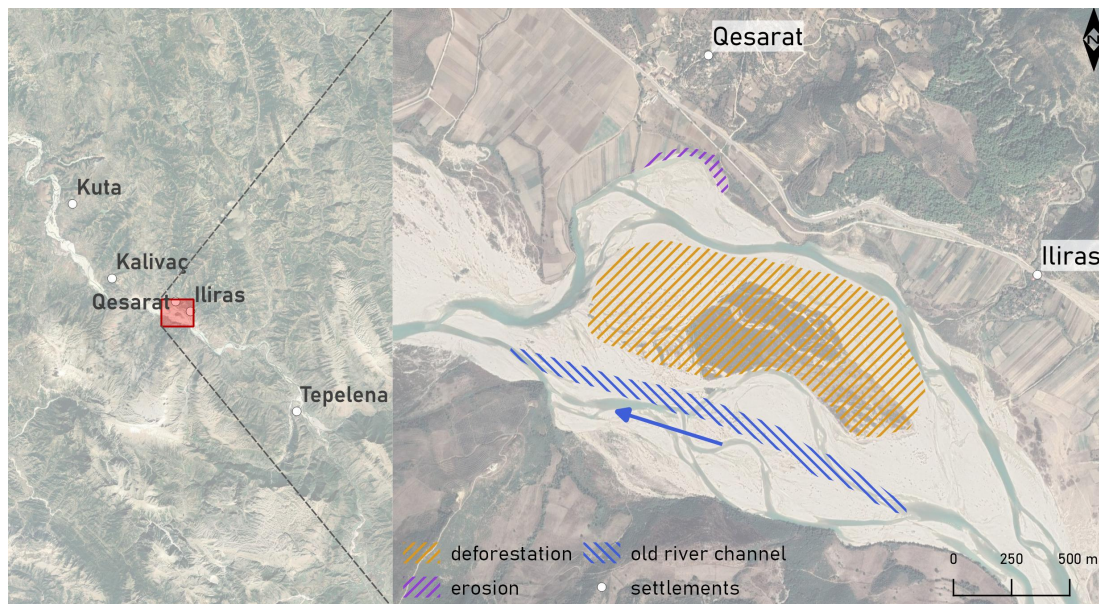


Figure 8: Changes observed by the local people of Qesarat and Iliras. The arrow marks the direction of river flow (© ZRC SAZU, Liza Stančič, 2022)

As Ilir, Durim, and other inhabitants of Iliras and Qesarat have observed, infrastructural interventions such as gravel mining, HPPs, road construction, and deforestation have led to increased erosion of the riverbank due to the diversion of the current towards its right bank. When asked to draw these sudden changes on the Google satellite map they were given during our conversations they have relatively accurately marked this detour and the increasing erosion of agricultural fields. Similar issues were monitored and mapped by Earth observation data during the period 1985-2000 (see Figures 6 & 8). Figure 6 shows changes in Vjosa's meanders observed by remote sensing analysis (Landsat satellite images) over a 40-year period (1958-2000), while Figure 8 shows the changes observed by the locals of Qesarat and Iliras which they have delineated on the Google satellite map.

Although interlocutors did not draw in all the meanders visible on the older satellite images (see Figure 6), the location of the diversion of one of the currents of the Vjosa drawn by the inhabitants of Iliras and Qesarat intersects very well with the Earth Observation data (see Figure 8). In other words, the villagers of Qesarat and Iliras have drawn the detour of the current to the right bank and the consequent soil erosion relatively accurately, and have clearly explained the reasons for the changes they have observed in the last decade. Despite seemingly indirect contact with the river, inhabitants

of Qesarat, liras, and other villages of the Vjosa Valley can perceive and map all the ruptures to the continuous dynamics which they embody in their knowledge practices. As Figures 6 and 8 show, the people of Qesarat and Iliras can remember the location of the Vjosa's channel from almost four decades ago.

The continuous dynamics of the river and its wider environments thus configure the permanence in the daily lives of people of the Vjosa Valley, and also relate to the scientific definitions of the river, in which its biodiversity and dynamic equilibrium position the Vjosa as a scientific object. Today, especially with transnational corporations and government policies trying in various ways to intervene radically in the river by building dams or mining gravel and so on, it seems that the aim is to stabilize this kind of dynamic continuity, disrupting the Vjosa's dynamic nature in the contemporary, neoliberal quest for predictability, control, and profit. All this will lead to further discontinuities, ruptures, and abrupt changes in the Vjosa riverine environments.

Conclusion

This article attempts to unlock the dynamic nature of the Vjosa River by intersecting different yet entangled scales. These are formed by various forms of knowledge and knowledge practices: scientific knowledge that defines the Vjosa as a "dynamic equilibrium" and "geomorphological continuum"; local knowledge practices that present the Vjosa as wild yet benevolent, bringing vitality and well-being to the valley; media reports that tout the Vjosa as a "unique and dynamic eco-heaven"; or activist movements that portray it as a "hotspot for biodiversity and ecological continuance." By juxtaposing these scales, this article demonstrates that the Vjosa riverine environments should be approached as a gathering in the making (cf. Tsing, 2017, p. 7).

While the scientists, media, and activists who research, report, or protest on behalf of the Vjosa approach its dynamics through its hydrological and morphological features and processes (e.g., gravel bars dynamics, sediment transport, branched and anastomosed streams, etc.), the local people who live along it experience these dynamics through their agricultural lands, which are "eaten" or eroded by the hijacking, torrential Vjosa. As explained above (see sections titled "Dynamic continuity—between knowledge and experience" and "Landscape structure"), the inhabitants of the Vjosa Valley have become habituated to this ambiguous character of the river, which is part of their sociality, just as their sociality is part of the ambiguous and dynamic nature of the riverine environments.

As Albanian ethnographer Rrok Zojzi (1950) points out, due to the lack of maneuverability and almost non-existent boating traditions, rivers in Albania used to form a greater divide than the mountains. For this and many other reasons, the inhabitants of the Vjosa Valley have not heavily managed the river course, for which they have great respect. Their relationship with the Vjosa is rather ambivalent, as they fear its wild nature and at the same time appreciate its vitality. As described by Zojzi (1950) and recalled by the local people, the history of the Vjosa Valley attests to their deep relationship with the agricultural land, the pastures, and home/house (*shtëpi*). In contrast to the course of the river, which they have left almost intact, they have managed these domains, which are embedded in their kinship system (family and patriline). The latter, in turn, is emplaced in their land (*toka*) and wider environment. As explained in the section on landscape structure, kinship—together with the political and economic system, and geographical and hydrological characteristics—configures the landscape structure. This is mapped and visualized, for example, in Figure 7, which shows how the change in the political system (the collapse of the communist regime followed by liberal democracy and the neoliberal market economy) led to a change in land tenure (from collectivization to decollectivization and privatization of the land and land sales) and management, resulting in fragmentation of the land.

Figure 7 to some extent explains how this landscape structure has been reconfigured through the multitude of entanglements and transformations between different scales – social, political, economic, physical-geographic, and hydrological. The continuous reconfigurations pertain to local sociality and ways of living (the kinship system and its gradual changes over time), riparian landscapes (forestation and deforestation, agricultural fields and their extension, collectivization and privatization, desertion), as well as hydrological features (high sediment transport causing river bank erosion, gravel bar formation, stream diversion). This can be also observed in Figure 6, which shows the changes in river flow in the villages of Iliras and Qesarat between 1986 and 2021, portraying how some meanders have evolved and changed their curvature over time. As recounted by the inhabitants of Iliras and Qesarat, these changes were gradual before the fall of the communist regime, while today, especially since 2015, the dynamics of these changes have accelerated due to increasing infrastructural interventions, leading to greater erosion of agricultural land and more frequent flooding in the region (see Gregorič Bon, 2020, 2021). It seems that in the constant pursuit of scalability these transnational and national infrastructural interventions have the tendency to transform the Vjosa into a static river that would be easier to manage, measure, and control. But

although they have introduced some discontinuities into the riverine environments the latter still remain malleable and bound to the constant becomings.

Vjosa riverine environments are made and remade through different scales and a multitude of temporalities, some of which can be partly seen in Figure 7, which shows the re-configuration of the landscape structure through land fragmentation, erosion of the banks, and change in the meandering and curvature of the river. Krause (2021) and Scaramelli (2021) concur that ever-changing, volatile environments, such as Mackenzie Delta in Canada or Kızılırmak Delta in Turkey, are bound to uncertainty, yet the dynamics of the Vjosa riverine environments actually confer predictability as the valley inhabitants have become habituated to these constant changes as a way of dwelling, and adapted accordingly (e.g., continuous migrations, building respect, recognizing the authority and ambiguity of the Vjosa; see Gregorič Bon, 2020, 2021).

By intersecting different, sometimes incommensurable scales—scientific, activist, social, political, and economic—we have attempted to apprehend the Vjosa through the different materialities (river, riparian landscape, agricultural plots and pasturelands, gravel bars), knowledges and subjectivities (river, local people, scientists, activists, anthropologist) that define its riverine environments in space and time. We have focused largely on the juxtaposition of scientific knowledge and local knowledge practices, both of which define the Vjosa as a dynamic, wild, and torrential river. On the one hand, scientific knowledge often envisages the river and its environment through its fluvial dynamics, seemingly due to the epistemological rigor of the natural sciences, which often approach the Vjosa as an object of study. The locals, on the other hand, live and experience the riverine environment through their perception of concrete agricultural land that incorporates the Vjosa, thus producing a fluid solid, where Vjosa is perceived as a subject in its own right. In this view, the meaning of the Vjosa's dynamics is, according to local knowledge practices, embedded in daily lives and ways of dwelling. In contrast, this dynamic often seems to be halted by the scientific pursuit of evidence-based data. Nevertheless, with the help of local activists (especially the EcoAlbania NGO), these similarities and differences between local and scientific knowledges have found a common language to communicate across differences, and have together succeeded in opening the Vjosa riverine environment to new potentialities. One of these is expressed in the memorandum between the Albanian Ministry of the Environment and Tourism and the outdoor company Patagonia, which envisages declaring the Vjosa a national park in 2022. This is a remarkable achievement against the backdrop of increasing extractivism in Al-

bania in recent decades, where civil society and environmental initiatives are often ignored or/and unsuccessful in these kinds of appeals (see for example Musaraj, 2021).

The local people of Kutë, Iliras, Qesarat, and other villages scattered along the valley pay respect to the Vjosa through their knowledge practices and daily life, and recognize its authority. In this way they build a sustainable relationship with the river, which they manage continuously but moderately through its riparian landscape, or more precisely, through their plots of land. At first glance the ethnographic material presented in some parts of this article might suggest exploring the relationship of local people to their land, which is inextricably linked to the meaning of the Vjosa; however, after a careful reading of the different knowledges, knowledge practices, and experiences that make and unmake the Vjosa's riverine environments, we apprehend the fluid solids of the river through its interplay with the solid fluids of terrestrial landscapes. Inspired by Ingold and Simonetti (2021) and Bruun Jensen (2017), the upcoming declaration of the Vjosa Valley as a national park, and the constant interplay between solidity and fluidity or amphibiousness, the Vjosa's riverine environments might "gain a new life" (cf. Bruun Jensen, 2017) with the potential for more sustainable futures.

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Povzetek

Reka Vjosa je dandanes zaradi njenega sorazmeroma še neokrnjenega porečja poznana kot biser v "Modrem srcu Evrope", kot se imenuje aktivistična kampanja, ki nasprotuje zajezevanju in si prizadeva za ohranitev neokrnjenosti rek jugovzhodne Evrope. Številni raziskovalci, med njimi biologi, hidrologi in geologi, bogati biohabitat Vjose opisujejo kot "dinamično ravnovesje" in "geološki kontinuum". Vsebinska članka raziskuje dinamičnost in "divjost" Vjose, ki se uteleša v življenjih njenih prebivalcev, in umešča njihova življenja v rečno okolje. Medtem ko aktivisti, znanstveniki in mediji izpostavljajo njeno dinamično kontinuiteto, lokalni prebivalci do reke gojijo ambivalenten odnos. Po eni strani se bojijo njenega "divjega" značaja, saj poplavlja in odnaša zemljo, po drugi pa cenijo njeno vitalnost, saj polja oskrbuje z vodo in minerali. Članek pojasnjuje Vjosino dvolično naravo in preiščuje pomene dinamike, kontinuitete, stabilnosti, ustaljenosti v okviru nenehnih poskusov nadzora rekine spreminjajoče se narave. Skozi prepletanje različnih meril in pogledov—družbeni, geografski, hidrološki, zgodovinski, politični in gospodarski—raziskuje množstvo prepletov in transformacij, ki oblikujejo rečno okolje Vjose. Dinamična, divja in dvoumna narava Vjose je del strukturne kontinuitete ali tako imenovane "strukture krajine," ki se nenehno upira sodobnim poskusom vzpostavitve nespremenljivosti in nadzora.

KLJUČNE BESEDE: Vjosa, rečna okolja, dinamična kontinuiteta, struktura krajine, Albanija

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