

Albania's Vjosa river, its tributaries, and other Balkan rivers face new threats to their natural flows as officials in the region, which encompasses up to a dozen southeastern European countries, consider proposals to build more than 3,400 new hydropower plants there. Critics warn that such developments could have devastating ecological consequences for one of Europe's most biodiverse regions. In addition to more than a dozen new dams planned for the Vjosa River's main tributaries, oil exploration is ongoing upstream on the Vjosa and the Albanian government has approved plans for a new airport in the bird-rich Vjosa delta.

Emerging from a nearby mountain gorge, the Vjosa River radiates across the vast gravel expanse below this historic, hill-set town. Its fast-flowing, turquoise waters weave a whimsical web of channels and streams. This is a river that runs where it wants.

It is also what many rivers in central Europe once looked like long ago, before they were polluted, dammed, and fragmented over the last two centuries. Today, more rivers in Europe have been altered and obstructed by man-made barriers than on any other continent. The Vjosa, which flows unimpeded through southern Albania to the Adriatic Sea, is one of the last major European rivers that still runs wild. That makes it the flagship for conservation efforts to protect smaller free-flowing rivers throughout the Balkans, which also remain relatively intact.

"The Vjosa is the pivotal battle for the protection of free-flowing rivers in the Balkans and beyond," says Ulrich Eichelmann, the CEO of Vienna, Austria-based Riverwatch, one of several conservation groups that a few years ago came together in a coalition called Save the Blue Heart of Europe.

Less than a decade ago, little was known about the Vjosa's rich biodiversity. "We had almost no idea what was there," says Aleko Miho, a taxonomist with the University of Tirana. During a 2017 bio-survey—conducted amid plans to build two dams in the middle section of the Vjosa—some 40 scientists from Albania, Austria, and Germany found dozens of species that long ago disappeared from regulated rivers in central Europe, including many aquatic insects.

"Vjosa is the lost world of Europe." says Fritz Schiemer, a retired ecologist from the University of Vienna, who spearheaded that survey with Miho.

### **Creatures small and smaller**

Last month, much of the same science team returned to Albania for another survey, this time focusing on two major tributaries of the Vjosa — Shushica and Bënça — part of a network of pristine rivers that extends three times the length of the Vjosa itself. "It's a

chance to study rivers in their natural conditions, which we can't do anymore in most of Europe," says Schiemer.

Although the river basin is home to charismatic animals like the critically endangered Balkan lynx, its richest biodiversity is found among less glamorous invertebrates, with insects making up the vast majority of species living here. "If you want to save the biodiversity of the Vjosa, this is where you must start," says Gernot Kunz, an entomologist at the Institute of Biology in Graz, who is an expert on true hoppers, a group that includes cicadas, leafhoppers, and spittlebugs, insects so common in the Vjosa's surrounding land areas that up to 10,000 of them may be found in a single square meter of space.

Near the village of Brataj, Anton Drescher stands on the gravel bank of the Shushica, inspecting a rock wall. A potpourri of wildflowers sprouts out of its cracks. Drescher, a botanist at the University of Graz in Austria, identifies most of them as typical Mediterranean species. "You don't see these flowers and plants all together like this in other places," he says.

At least 31 fish species have been identified in the Vjosa, including several endangered kinds, such as the Skadar gudgeon, a tiny carp endemic to the Balkans. It appears the river has also become a refuge for critically endangered European eels coming in from the sea. "We see an abundance of marine fish in the lower parts of the river," says Paul Meulenbroek, a fish ecologist at the University of Natural Resources and Life Sciences in Vienna.

Other often-overlooked organisms common here are mollusks, and in particular snails, which thrive in piles of organic material washed up on the riverbanks. Very little data exists on these diverse creatures in the Vjosa, says Michael Duda, a malacologist at the Natural History Museum of Vienna. "It could be that we are losing species that we didn't even know existed."

### **What's at risk**

The task of cataloguing the flora and fauna here has taken on added urgency because of the plans for the hydropower plants on the Vjosa tributaries, which includes five along the Shushica. "The scientific data will help us prove in court that the dams will do serious and irreparable harm to the ecosystem," says Dorian Matlija, a lawyer with the Albanian non-profit Res Publica, who is waging a legal battle against the dam construction.

While the construction of dams would block important fish migrations, intensifying fishing pressure may already be taking a toll on migrating fish. Near where the Shushica joins the Vjosa, fishing nets can be seen blocking the entire width of the river. There are no signs of

the critically endangered European sea sturgeon, which once came into the Vjosa to breed. The Vjosa has one dam, built in the late 1980s near its origin in the Pindus Mountains across the border in northern Greece, where the river is known as Aoos. But for the rest of its 170-mile course, it flows freely through a mosaic of Albanian mountain landscapes that include dramatic canyons and braided river sections more than a mile wide.

Plans by the Albanian government to dam the Vjosa River date back to the 1990s, a chaotic time for Albania as it emerged from decades of isolationist and Communist rule. With a population of less than three million people, Albania generates almost all its electricity from hydropower, most of which is produced on rivers in the northern part of the country, where there are 170 dams. It is one of the poorest nations in Europe, though its economy has been steadily growing.

### **Growing electricity demands**

There are close to 1,500 hydropower plants operating throughout the Balkans today, far fewer than elsewhere in Europe. Dam proponents say a hydropower expansion in the region is needed to satisfy increasing electricity demands and to fuel struggling national economies, with dams also touted as a climate-friendlier way of energy production than, say, burning coal.

Critics counter that few of the projects are economically feasible and are often designed to serve private or political interests. With more than 1,000 of the new dams—about a third of the total—planned in protected areas, conservationists warn that the environmental impacts will be disastrous. They urge Balkan governments to instead focus on cheaper renewable energy, like solar and wind, that they say are truly green.

When the current government took power in 2013, officials vowed to move away from hydropower and focus on the protection of nature as part of a drive to turn Albania into an eco-tourism destination, built around pristine areas like the Vjosa.

"This government has confirmed that no hydropower will be allowed in the Vjosa River," Blendi Klosi, Albania's minister of tourism and environment, said in an email. Last year, his ministry denied, on environmental grounds, a final appeal by a Turkish-Albanian consortium to build the Kalivaç Dam, the larger of the two proposed dams on the Vjosa, in a major victory for river advocates.

Meanwhile, the construction of close to 100 dams, most of them small, continues elsewhere in Albania, and the government has not made any moves to cancel concessions for projects planned on Vjosa tributaries. "There is a lack of transparency every step of the way" with this government, says Neritan Sejramini, a well-known Albanian political commentator.

"There are no strategic plans for investment programs, but rather random interventions." Three tributaries to the Vjosa have already been dammed, including the Langarica, which flows through a national park and where the last of three hydropower plants came online in 2015. Today, the river that once flowed freely through a spectacular, seven-mile-long canyon here has had its waters diverted into giant pipes, turning it into a mere trickle.

### **Looming threats**

The Albanian government has also drawn a firestorm of protest for selling to Shell the rights to explore for oil and natural gas in the southernmost mountain region, through which the Vjosa River runs. Residents there say any future oil production will have catastrophic environmental consequences, and would ruin the area as a tourist gem for hiking and rafting.

"No one will want to visit a place where they're digging for oil," says Aleks Tane, who works as a river guide in Permet, a picturesque town near the Greek border.

A Shell spokesperson declined a request for an interview and said in a written statement that the company "will never drill for hydrocarbons in the Vjosa valley," but did not define the valley's boundaries. The spokesperson added, without explanation, that the project would come to "demonstrate an overall positive impact on biodiversity" in the area. Klosi, the Albanian tourism minister, said in his email that the environmental impact would be "nearly zero."

Plans to build a privately funded international airport in the Vjosa River's delta region have also been sharply criticized by conservationists. The proposed site, once home to a small, military airport, sits inside a previously protected wetland area that is connected to the vast Narta lagoon. The water there is a refuge for more than 200 mostly migratory birds, including greater flamingos that have returned to the area in recent years after a long absence.

A recent redrawing of the Vjosa-Narta Protected Landscape, with the proposed airport site now excluded from it, has been criticized by opponents as a government effort to accommodate the airport's construction.

"The new protected area is like a Swiss cheese, it has a lot of unprotected holes in it," says Mirjan Topi, an ornithologist who works as a bird guide in Vjosa-Narta.

"What makes Albania special is its biological riches," Topi says. "If the airport is built, one of the great biodiversity treasures, not just in Albania but Europe, will be lost."

A blueprint

In an appeal to voters ahead of last April's national elections, Prime Minister Edi Rama, who

was re-elected, had vowed to make the Vjosa a national park. Instead, his government named it a "nature park," a designation that the International Union for Conservation of Nature says provides fewer protections than national park status. A national park is technically given legal protection against all infrastructure projects, such as hydropower plants and airports, whereas a nature park is not.

"The value of the Vjosa River warrants more than the nature park designation," says Andrej Sovinc, the vice chair of the IUCN World Commission on Protected Areas.

Historically, protected areas have been designed for terrestrial ecosystems, not the rivers that may be running through them. While some European national parks are named after rivers, there is only one, the Danube-Auen National Park in Austria, that could be considered a true river national park, as it is limited to the actual Danube River and its riparian habitat. But that park only covers a stretch of the Danube, which otherwise is one of the most heavily modified rivers in Europe.

Now, Vjosa advocates are pushing to turn the entire Vjosa River network into a national park. "The tributaries are like the veins in our body circulating the blood; if we cut them the body will die," says Besjana Guri of EcoAlbania, an environmental non-profit organization that is leading the campaign and earlier this year presented a detailed proposal for a basin-wide national park to the Albanian government.

Eichelmann, of Riverwatch, sees it as a blueprint for river restoration everywhere. "It's not enough to just protect rivers here and there," he says.

Drawing on international support from celebrities like Leonardo DiCaprio and clothing company Patagonia, the Save the Blue Heart campaign has steadily gained momentum on the ground in the Balkans in recent years, and lately it has scored a string of victories. Last month, the prime minister of North Macedonia, Zoran Zaev, announced that most concession contracts for small hydropower plants in his country would be annulled.

At the same time, the prestigious Goldman Environmental Prize was awarded to "the brave women of Kruščica," a group of women from Bosnia-Herzegovina who occupied a bridge over the Kruščica River for over 500 days and nights, while defying violent eviction attempts by the police, to protest the construction of two hydropower plants. It was the second time in the past three years that activists protesting against hydropower in the Balkans have won the award. Even in Albania, where any type of civic activism was totally suppressed for decades, championing the environment is becoming more visible among the people, especially the younger generation. "That fear of protest still exists, but this is changing," says Olsi Nika, a biologist with EcoAlbania.

He cites a recent survey showing that 94 percent of Albanians want the Vjosa River to be

designated a national park as evidence that his countrymen and women are becoming more aware and appreciative of their environmental riches.

For Eichelmann, who is German, visiting the Vjosa is a reminder of what much of central Europe once looked like. One early morning during the week of the science exploration, he ventured up a small, unnamed tributary of the Shushica River. Suddenly, the landscape opened up to a spot where crystal clear water skirted around little islands that had formed in the river. Orioles and dragonflies buzzed around poplar and platanus trees. "Standing in a place like that," he says. "You truly understand what we have lost."

Source: [nationalgeographic.com](http://nationalgeographic.com)