

# Financing for hydropower in protected areas in Southeast Europe: 2018 update

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## Glossary of key concepts

**'Actively planned' plant:** A hydropower plant which has been offered for investment, a concession has been issued, or other planning such as studies, inclusion in planning documents or public statements by decision-makers has been undertaken within the last 3-4 years.

**Existing plant:** A hydropower plant which existed prior to 2005.

**Financial intermediary:** A financial institution (usually a commercial bank or national development bank) that channels money from multilateral development banks to smaller projects via loans.

**Greenfield plant:** A project which has either started operating since 2005 or is currently planned or potential - the opposite of an existing plant.

**Potential plant:** A case in which hydropower potential has been identified in a study but no action has been taken to develop an investment project, or a project which has been around for some years and currently seems unlikely to go ahead, but which has never officially been cancelled and could re-emerge.



*Protest by local affected people against the Pocem dam on the Vjosa river in Albania. Resistance to hydropower is increasing across the region. Photo: © Olsi Nika*

## Executive summary

Southeast Europe<sup>1</sup> is a biodiversity hotspot, yet its wild rivers are being destroyed by a wave of hydropower projects. Despite increased public resistance in recent years, governments and companies across the region are still riding roughshod over the region's natural resources.

In 2015 Bankwatch undertook ground-breaking research to find out who is financing this “hydropower tsunami” and discovered that the role of the European public banks was much larger than anyone had realised. Today's report represents an update and expansion of this work to identify what has changed in the last two years, including more information on commercial banks, and more data on Serbia, Bulgaria and Bosnia-Herzegovina.

Overall, the dynamics vary in each country. While countries like Montenegro, Slovenia and Croatia are mainly planning a smaller number of larger projects within the next few years, the craze for building hydropower plants even on very small streams continues in Albania, Macedonia and Bosnia-Herzegovina, and looks like it is picking up speed in Serbia and Kosovo.

Albania also continues to build large hydropower plants at a rate unheard of in the rest of the region, including in the Valbona National Park where three plants are currently under construction.<sup>2</sup> In Bulgaria a large number of small projects are hanging in limbo after the country changed its subsidies regime, but its rivers are still threatened by several projects like the Yadenitsa dam.

We have identified 2112 greenfield plants<sup>3</sup> either being planned now or having entered operation since 2005. By “greenfield” plants, we mean new hydropower plants built on locations that were not previously developed. Out of these, no fewer than 471 have started operating already. In spite of the damage already done, there is much that can still be prevented: For more than 1000 plants, we assess that no financing has been secured yet. The real number is likely to be even higher as our data does not capture all the potential plants.

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<sup>1</sup> In this report we cover Albania, Bosnia-Herzegovina, Bulgaria, Croatia, Kosovo, Macedonia Montenegro, Serbia, and Slovenia

<sup>2</sup> <http://www.exit.al/en/2017/11/13/albanian-activists-hold-two-day-protest-against-the-building-of-hydropower-plants-in-valbona-national-park-2/>

<sup>3</sup> Apart from these 2112, the remaining plants in our database at <https://bankwatch.org/publication/financing-for-hydropower-in-protected-areas-of-southeast-europe-update> are ones that already existed before 2005, cancelled plants, conversions of existing dams, weirs, mills and water pipes that are not expected to have a major impact on river flows, or duplicates of other plants.

In 1772 greenfield projects the project company was identified. These range from large state-owned enterprises to small local companies. Most projects, especially the small ones, are carried out by domestic companies. Of projects involving foreign investment, Austria and Italy are the most frequently represented. Austria's Kelag Group and its Slovene subsidiary Interenergo are involved in 19 greenfield projects, of which 10 appear to be in protected areas.

For 239 greenfield projects we have identified signed financing and for 20 more projects we identified planned financing. For 1119 projects we believe that no financing has yet been found. For 734 greenfield projects we could not trace financing due to the lack of transparency in this field.

Altogether we identified 158 greenfield projects with financing from commercial banks, 55 of which appear to be in protected areas. The most frequent commercial hydropower financiers identified were Austria's Erste & Steiermaerkische Bank and Italy's Unicredit Group with 28 loans each. Other banks identified included Italy's Intesa Sanpaolo, United Bulgarian Bank (KBC), France's Societe Generale, Austria's Raiffeisen, Bulgaria's CIBank (now part of Belgium's KBC), and Montenegro's Prva Banka.

The identified loans most likely represent only a relatively small percentage of the total as most commercial banks refuse to state which projects they have financed. It is high time for banks to tighten their lending practices in this field and to improve their environmental and disclosure standards to ensure that they are no longer complicit in the destruction of Balkan rivers.

At least 82 plants have been financed by multilateral development banks since 2005. The European Bank for Reconstruction and Development (EBRD) has been the most important actor (at least 61 greenfield plants supported with at least EUR 126 million). The European Investment Bank (EIB) has provided the largest amount of financing by volume (EUR 445 million for 11 plants).

In addition to financing which could be traced to specific plants, the EIB has provided over EUR 22 million to at least 22 small and mini hydro power plants through commercial banks in the region through financial intermediaries whose final clients could not be traced. The EIB has declined to systematically identify the names of the projects, citing client confidentiality.

The World Bank's International Finance Corporation (IFC) has supported the construction of at least 8 greenfield hydropower plants either directly or through financial intermediaries and its Multilateral Investment Guarantee Agency (MIGA) has guaranteed a loan for two plants.

At least 37 projects supported by multilateral development banks are in protected areas or internationally recognised areas of high biodiversity value. Again, the EBRD is most visible here, with 29 such projects. This is most likely the tip of the iceberg in terms of damage to the region’s rivers, considering that many crucially important habitats remain unprotected by law.

Key figures	
Total number of greenfield projects built since 2005 or now planned	2112
Out of these - operational	471
Out of these - actively planned	915
Number of greenfield projects in protected areas or internationally recognised areas of high biodiversity value	767
Number of greenfield projects for which signed financing has been identified	239
Out of these - financed by multilateral development banks	82
...in protected areas or or internationally recognised areas of high biodiversity value	37
Out of these - financed by commercial banks	158
...in protected areas or internationally recognised areas of high biodiversity value	55

Recognising the damage being done to southeast Europe’s unique biodiversity by hydropower, in recent years the European development banks have tightened their environmental policies somewhat with regard to this sector, however more still needs to be done to take account of the poor environmental governance standards in many of their countries of operation. Starting in 2018 the EBRD and EIB will review their environmental and public information policies, while the EIB will draw up guidelines for hydropower lending and financial intermediaries. This provides an ideal opportunity to introduce clear no-go zones and to tighten up environmental and disclosure standards for their financial intermediaries.

The EU too must play an important role. As well as better supervising the financial institutions in which it has a decision-making role (the EIB and EBRD) and better regulating EU companies operating outside the EU, it needs to be more active in promoting the adoption of EU legislation in the Energy Community countries. The Water Framework Directive is the foundation stone for decision-making on the fate of rivers in the EU and needs to be upheld and extended to the Energy Community countries, together with the Nature and Habitats Directives.

The EU’s recently drafted Principles for Sustainable Hydropower Development<sup>4</sup> are a positive move to promote a more responsible approach to hydropower development

<sup>4</sup> <https://www.wbif.eu/sectors/energy/sustainable-hydropower>

but cannot be a substitute for binding legislation. The Principles also risk being undermined by the adoption of a list of priority greenfield projects which, given the lack of hydrological and ecological baseline data in the region, risks promoting projects which later turn out to be damaging.

This also means the EU needs to play a greater role in promoting diversification of renewable energy sources. A region-wide drought in 2017 proved once again that excessive reliance on hydropower in an era of climate change is unwise, not only from an environmental but also from an energy point of view.<sup>5</sup>

Public resistance against hydropower is noticeably growing across the region. If action is not taken soon to prevent further financing of destructive projects, the whole renewable energy sector will face a backlash, as it already has done in Bulgaria and to some extent in Montenegro. It is in all of our interests to prevent this and ensure that the region steers itself towards a more sustainable energy future.

This means that all actors involved need to take strong political decisions to prevent more harm being done to southeast Europe's valuable natural areas.

Governments need to diversify their renewable energy plans, take advantage of the great opportunities the region has for energy saving, and make sure biodiversity-rich areas are adequately protected from hydropower development.

Commercial banks need to improve the implementation of their environmental policies and in some cases the policies themselves, as well as disclosing which projects they plan to finance.

Multilateral development banks need to halt financing for hydropower in biodiversity-rich areas and improve disclosure of information and due diligence on projects financed through commercial bank intermediaries.

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<sup>5</sup> <https://uk.reuters.com/article/balkans-power/west-balkans-energy-bills-surge-as-drought-curbs-hydropower-output-idUKL8N1LG2BH>



# 1. Introduction

In the last two decades southeast Europe (SEE) has experienced a wave of hydropower projects. Bulgaria moved fastest to hand out concessions on small rivers and streams in the late 1990s and early 2000s and was then joined by others. Albania has been the most active in this regard, awarding 183 concessions for no less than 524 hydropower plants since 2002.<sup>6</sup> The negative social and environmental consequences in Bulgaria and Albania unfortunately did not cause other countries in the region to learn from their experiences and recent years have seen an upsurge in construction in Bosnia-Herzegovina, Kosovo, Macedonia, Montenegro and Serbia.

No area is too sacred to have been left untouched by this outbreak. A recent study by Fluvius found that 37 percent of planned projects in the region are in protected areas<sup>7</sup> - which is of particular concern considering that many valuable areas in the Balkans are under-protected.

In 2015 a major Bankwatch study<sup>8</sup> examined who is financing such projects – both overall and inside protected areas. We found that the European public banks – the European Bank for Reconstruction and Development and the European Investment Bank – had financed many more hydropower plants in the region than they had publicly disclosed and that many of them were in protected areas.

This report represents an update and expansion of our 2015 research in order to see what has changed since then. The main innovation since 2015 is that we were able to get more information about commercial banks' support for hydropower plants in some of the countries this time round, as well as additional information about the EBRD's financing through financial intermediaries, which enables us to have a better - although still very partial - picture of financing.

There is considerable variation across the countries, but what they all have in common is the need for vigilance. New projects are constantly appearing, while projects which were developed decades ago are rarely officially cancelled. To try to take account of this we have distinguished between 'potential' projects, which are not making any obvious progress, and 'planned' projects which are being actively pursued. However it would be unwise to write off the 'potential' projects as cancelled: Decades-old projects keep re-appearing, no matter how environmentally or economically unacceptable they are - Kosinj/Senj II and Molve I and II in Croatia are recent examples.

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<sup>6</sup> National Agency of Natural Resources: <http://www.akbn.gov.al/situata-hidroenergjitike/>, accessed 27 February 2018

<sup>7</sup> Ulrich Schwarz, Fluvius Vienna: Hydropower Projects on Balkan Rivers Data Update 2017, Riverwatch and Euronatur, <http://balkanrivers.net/sites/default/files/Hydropower%20development%20in%20the%20Balkans%202017.pdf>

<sup>8</sup> <https://bankwatch.org/publications/financing-hydropower-protected-areas-southeast-europe>

In spite of our best efforts to fill some of the gaps in the 2015 research by expanding our database, especially on Serbia, Bulgaria, and Bosnia-Herzegovina, the picture is still likely not complete. There are also numerous issues in all countries with lack of official data, inaccurate and contradictory data, duplications of project and river names, different names for the same projects, contradictory information about whether plants are in protected areas, and failure by the investors and authorities to admit when projects are cancelled.

Nevertheless, we have tried to capture the situation as accurately as possible, and believe that the database gives a picture of the main trends. Plants which entered operation since 2005 have been included in the research in order to get a picture of the financing, as it is rarely possible to get an accurate insight into the financing of a project which has not been implemented yet. The details of the methodology are provided in Annex I.



*The river Drina near the planned site of the Buk Bijela dam in Bosnia-Herzegovina: Chinese companies have expressed interest in the project*

## 2. Overview of results

We have identified 2112 greenfield plants<sup>9</sup> either being planned now or having entered operation since 2005.<sup>10</sup>

Out of these, 471 are in operation while 915 are actively planned,<sup>11</sup> and a further 524 are regarded as potential projects<sup>12</sup> rather than current ones. The remainder of the greenfield projects are either at an unclear stage or under construction.

The real number of potential plants is probably larger. According to Fluvius (2017)<sup>13</sup> there is evidence of about about 2,800 hydropower projects in the region (including Greece). Not all of these are included in the Bankwatch database as we have put an emphasis on the more active projects in order to assess who the main players are.

All this means that despite the damage already done, there is still much that can and must be prevented.

Of the greenfield plants identified, the largest number are in Albania (498) followed by Bulgaria, Bosnia and Herzegovina, Serbia, Macedonia, Montenegro, Croatia, Kosovo, and Slovenia.

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<sup>9</sup> Meaning new plants built on locations that were not previously developed. This excludes plants that already existed but were renovated and a small number of plants which make use of existing structures like weirs, dams and mills. However in cases where it is clear the plant represents a significant expansion of the existing structure it is counted as greenfield.

<sup>10</sup> Our database overall contains 2674 plants. Apart from the greenfield plants, the others already existed before 2005 (369), too little information was available to identify them (93), they were duplicates of other projects (49), they are planned conversions of already existing dams, mills, water supply systems or weirs (27) or they have been cancelled (24). Compared to the 2015 research we have added 757 more greenfield plants (total 1355 greenfield plants identified in 2015).

<sup>11</sup> 'Actively planned' means they have been offered for investment, a concession has been issued, or other planning such as studies, inclusion in planning documents or public statements by decision-makers has been undertaken within the last 3-4 years.

<sup>12</sup> 'Potential' denotes cases where hydropower potential has been identified in a study but no action has been taken to develop investment projects, plus projects which have been around for many years and currently seem unlikely to go ahead, but which have never officially been cancelled and could re-emerge.

<sup>13</sup> Ulrich Schwarz, Fluvius Vienna: Hydropower Projects on Balkan Rivers Data Update 2017, Riverwatch and Euronatur, <http://balkanrivers.net/sites/default/files/Hydropower%20development%20in%20the%20Balkans%202017.pdf>. More information on the data differences is provided in the Annex on Methodology.



## No of greenfield plants identified by country

	Albania	Bosnia and Herzegovina	Bulgaria	Croatia	Kosovo	Macedonia	Montenegro	Serbia	Slovenia
Number of greenfield plants	496	345	401 <sup>14</sup>	120	103	167	138	299 <sup>15</sup>	43 <sup>16</sup>

Of those greenfield plants whose capacity could be identified, most that have started operating since 2005 have been less than 10 MW. However it may come as a surprise to learn that no fewer than 23 plants larger than 10 MW have started operating since 2005 as well, mostly in Albania and Slovenia.

## Capacity of built and planned plants, where identified

Number of greenfield plants - MW capacity	0.1<1	1<10	>10 (including 10 MW)
Built plants	242	178	23
Planned plants	574	626	214

## Hydropower plants in protected areas

Out of the 2112 greenfield plants identified, 735 of them have been identified either in the 2015 study by Fluvius or in subsequent research as being in protected areas. Of these, 152 are already operating, 34 are under construction and 513 are planned/potential, with the remainder at an unclear stage.

<sup>14</sup> There are more potential plants than this, however many of them have no name and/or are very unlikely to go ahead.

<sup>15</sup> There are certainly many more potential plants than this, however many of them have no name and/or there has been no activity on them in recent years. We therefore concentrated on plants where there has been some activity in recent years.

<sup>16</sup> There are certainly more plants than this, however many of them have no name which makes their financing near-impossible to trace.

## 2.1. The companies behind the projects

In 1771 out of 2112 greenfield projects we have been able to identify the companies which manage the projects (project sponsors). 545 of the projects with identified sponsors are in protected areas. Most of the companies carrying out small hydropower projects are relatively anonymous small companies, while as expected, the larger energy companies such as the state-owned Elektroprivreda companies in Croatia, Serbia and Bosnia and Herzegovina are often behind the larger projects, either with private partners or not. In Albania almost all the projects are carried out by the private sector, including the larger ones, ranging from well-known international names such as EVN, Verbund (both Ashta) and Statkraft (Devoll) to Albanian companies such as Gener-2 and Fusha and Turkish companies such as Ayen Enerji.



*Abandoned construction site of the Kalivac dam on the river Vjosa in Albania. In 2017 a new concession was issued to Turkey's Ayen Enerji & Albania's Fusha to re-start the project. Photo: © Roland Dorozhani*

Very few of the companies have any significant internet presence, but depending on the country and on whether its business register discloses company owners, it has

sometimes been possible to see who are the investors behind the companies (either individual people or other companies).

As we reported in 2015, in Montenegro, a series of companies owned or represented by people known to be close to the ruling party is involved in the hydropower sector (see Montenegro country profile). This issue is most exposed in Montenegro but appears also to be present in other countries. In Serbia, some investors are controversial with alleged connections to the criminal milieu (Gradiste plant and Serbian criminal Ljubisa Buha Cume)<sup>17</sup> or are alleged to be involved in illegal surveillance (Doo National Electric Company).<sup>18</sup>

While most projects are carried out by domestic companies, out of those which involve foreign investment, countries neighbouring the region and those with a strong hydropower tradition such as Italy and Austria are the most frequently represented.

There are not many companies with more than a few projects. In 2015 we highlighted the role of two Austrian companies, the Kelag Group and Energy Eastern Europe Hydro Power GmbH.

Kelag<sup>19</sup> and its Slovenian subsidiary Interenergo are involved in 19 greenfield projects, of which 8 appear to be in protected areas.<sup>20</sup> One of these, Medna Sana in Bosnia-Herzegovina, has for several years been subject to protests by local people supported by NGOs like the Center for Environment, as it is being constructed near the source of the beautiful Sana river. However the company is attracting attention in Kosovo as well as it is planning the Peja cascade inside the Bjeshket e Nemuna National Park.<sup>21</sup>

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<sup>17</sup> <http://www.capital.ba/ljubisa-buha-cume-preuzeo-rudnik-boksita-srebrenica/> (in Serbian)

<sup>18</sup> <https://www.vranjske.co.rs/2013-05-23/tra%C5%BEi-se-gospodin-popovi%C4%87.html> (in Serbian)

<sup>19</sup> Kelag is owned by the Kaernten public authority (Austria), RWE (Germany) and Verbund (Austria, in turn half-owned by the Austrian government) [http://konzern.kelag.at/content/page\\_eigentuemmer-9268.jsp](http://konzern.kelag.at/content/page_eigentuemmer-9268.jsp)

<sup>20</sup> This is even more than the 13 plants with 9 in protected areas that we identified in 2015. The change appears to be more due to improved data collection than a change in the company's plans. A further existing plant in Kosovo, Lumbardhi, is also under the company's management.

<sup>21</sup> <https://derstandard.at/2000057906111/Kelag-Widerstand-gegen-Kraftwerksprojekt-in-Kosovo-waechst>



## Interenergo/Kelag

Country	Plant name	Status	River	Protected area (where applicable)
<b>Bosnia-Herzegovina</b>	Melina/Novakovići	Operating	Ugar	
	Zapeće	Operating	Ugar	
	Medna Sana 1	Under construction	Sana	Upper Sana Planned Nature Park
	Sastavci	Operating	Vrbas	
	Jelići	Operating	Vrbas	
	Ružnovac	Operating	Vrbas	
	Derala	Unclear	Potok Derala	
	Duboki Potok (Desna)	Operating	Desna	
<b>Kosovo</b>	Decan cascade / Bellaje	Operating	Decani	Bjeshkët e Nemuna National Park
	Decan cascade / Decan	Operating	Decani	Bjeshkët e Nemuna National Park
	Decan cascade / Lumebardhi 2	Under construction	Decani	
	Peja cascade / Kuqishta (Kelkos)	Planned	Peja	Bjeshkët e Nemuna National Park
	Peja cascade / Drelaj 1	Planned	Peja	Bjeshkët e Nemuna National Park
	Peja cascade / Shtupeq	Planned	Peja	Bjeshkët e Nemuna National Park
	Peja cascade / Drelaj 2	Planned	Peja	Bjeshkët e Nemuna National Park
	Peja cascade / Rugova	Planned	Peja	Bjeshkët e Nemuna National Park
<b>Montenegro</b>	Vrbnica 1	Planned	Vrbnica	
	Vrbnica 2	Planned	Vrbnica	
<b>Serbia</b>	Poštica	Operating	Poštica	

Meanwhile, Energy Eastern Europe Hydro Power GmbH<sup>22</sup> has been reducing its exposure in the hydropower sector in the Balkans in recent years. In 2015 we identified 27 plants, 11 in protected areas, in the company's portfolio. It now appears to have 16

<sup>22</sup> Owned by Wien Energie – Wienstrom GmbH; Energie-Zotter-Bau GmbH & CO KG and Fras Beteiligung und Beratung GmbH (Austria)

plants in Bosnia-Herzegovina and Macedonia. One - Toranica 179-3 - appears to be in a protected area.<sup>23</sup> Due to lack of publicly available information and time constraints we were not able to establish whether its concessions have been passed to other companies or the plans have been cancelled. In 2016 it agreed to cancel a concession for the Grlja plant in Montenegro due to sustained public opposition to its plans.<sup>24</sup>

### Energy Eastern Europe Hydro Power GmbH

Country	Plant name	Status	River
Bosnia-Herzegovina	Sučeska R-S-1	Operating	Suceska
	Sučeska R-S-2	Operating	Suceska
	Radojna	Planned	Radojna
	Čardak	Operating	Gostovic
	Rujevica Ušće	Operating	Gostovic
	Botašnica Ušće	Operating	Gostovic
	Janjina J2	Planned	Janjina
	Kamenica	Planned	Gostovic
Macedonia	Banjanska 1	Operating	Banjanska
	Ljubanska	Operating	Ljubanska
	Golemača	Operating	Golemaca
	Kriva reka 179-2	Under construction	Kriva
	Brestjanska	Operating	Brestjanska
	Mala Reka (also Rijeka)	Operating	Mala
	Kriva reka 179-1	Operating	Kriva
	Toranica 179-3	Operating	Toranica

<sup>23</sup> The coordinates for this plant are not 100 percent certain but all the other plants in the cascade are in Osogovo Mountains Emerald site so it is estimated that also this one is.

<sup>24</sup> <http://www.gov.me/ResourceManager/FileDownload.aspx?rId=232180&rType=2>

## 2.2. The projects' financiers

Most small hydropower projects are financed by commercial bank loans and guarantees topped up by companies' own resources. These cannot be systematically tracked as banks usually claim they are not allowed to disclose information about their clients. However occasionally news emerges of a particular deal. In addition, pledge registries, business registries and land registries in some countries sometimes contain information on loans taken for the construction of hydropower plants.

Many projects have not yet managed to attract financing. We estimate that this is the case for at least 1119 of the planned and potential projects.

In 259 greenfield projects we have positively identified some financing sources for the project,<sup>25</sup> including planned or cancelled financing. For 239 we identified signed financing.

### Financing identified by type of institution

	Financed by own resources	MDB financing	Commercial banks financing	Other public financing	Total
Number of greenfield projects for which financing has been identified (not including planned or cancelled financing)	53	82	158	47	239

*Note: the total is not the sum of other boxes because some projects have more than one source of financing.*

Projects with support from commercial banks make up the largest group with identified financing. This is probably still an underestimate because information on commercial bank financing is not readily available to the public.

Multilateral development banks (MDBs) such as the European Bank for Reconstruction and Development, World Bank Group and European Investment Bank come next. It should also be noted that even information from MDBs is not complete due to the existence of credit lines channelled through commercial banks, usually aimed at energy efficiency and small-scale renewable energy projects. Even though public

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<sup>25</sup> This includes loans and guarantees for the construction of projects, as far as they could be identified. Project preparation grants are recorded in the database but not counted in the statistics.



money is being used, the final beneficiary is usually not disclosed, due to client confidentiality.<sup>26</sup> This needs to change.

Even if the MDBs are not involved in each and every project in the region, they are usually seen as trend-setters. Their moves are usually followed by other financiers, so stopping financing in a particular sector or in certain areas would send a strong signal to other investors to do the same.

'Other public funding' refers to a relatively diverse set of financing sources, including export credit agencies, development finance institutions from particular countries such as Germany's KfW, or national development funds of the countries where the project is taking place such as Montenegro's Investment-Development Bank (IRF).

### **Commercial banks**

158 greenfield projects with commercial bank financing were identified,<sup>27</sup> 55 of them in protected areas. This number includes 35 projects financed via credit lines provided by the EIB, EBRD and IFC.<sup>28</sup> In some cases the precise commercial bank could not be identified since there is more than one bank running such credit lines within the project country.

Considering the limited information available about most involvement of commercial banks in hydropower projects it is difficult to draw definite conclusions about which commercial banks are most involved in hydropower projects in the region. Improvements in transparency are therefore recommended.<sup>29</sup>

However, bearing this caveat in mind, our findings are that Erste & Steiermaerkische Bank and Unicredit Group are the most prolific commercial financiers, each with around 28 plants financed (see tables below).<sup>30</sup> Erste's investments were mainly identified in Serbia while Unicredit's were more spread across the region including

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<sup>26</sup> The EBRD has started to disclose some information on projects financed through its WeBSEFF programme. This is a very welcome step forward towards transparency and accountability of the bank's financing.

<sup>27</sup> Compared to 39 in 2015.

<sup>28</sup> This means that these projects are counted both as EBRD/EIB support *and* as commercial bank support, because both contributed to their financing. However the overall number of projects (greenfield, projects for which financing has been identified etc.) are counted in terms of projects, not loans, so they are not double-counted in terms of overall number of projects or in terms of sum of money, as no attempt has been made to sum up the total amount of support from commercial banks.

<sup>29</sup> No sum is given for commercial bank financing as the number of projects is most likely larger than have been identified here. Second, for many of the projects where commercial bank financing has been identified, it was not possible to identify the amount of financing involved. Third, as many of the commercial banks intermediated credit lines provided by the multilateral development banks, summing up the funds provided by commercial banks would lead to double-counting.

<sup>30</sup> Some of the financing in Bosnia-Herzegovina may be for one plant or spread across several owned by one company.

Serbia, Bosnia-Herzegovina and Bulgaria. Other banks identified included United Bulgarian Bank (11 projects), Intesa Sanpaolo and Raiffeisen (10 projects each), Societe Generale (9), CIBank (7), and Prva Banka (5). United Bulgarian Bank and CIBank are now part of KBC group, based in Belgium, and have provided financing only in Bulgaria. Raiffeisen has been identified mainly in Albania although it is an international bank, while Intesa's financing has been spread across Albania, Croatia and Serbia. The table below provides more details.

### **Erste & Steiermaerkische Bank**



*Low water levels even in February below the intake at the Erste-financed Kneževići plant near the Kopaonik National Park in Serbia. Photo: Igor Vejnović*

Austria's Erste Bank is particularly prominent in Balkan hydropower financing, with 28 projects identified – 26 in Serbia and two in Montenegro. It is not clear whether Erste really finances more than other banks or whether it has simply been easier to access information about it, but in either case, Erste's financing is significant.

Although hardly any of the financing identified was for plants in legally protected areas, the bank has financed 7 plants in the area of Jošanička Banja in Serbia, with one inside the Kopaonik National Park. Local people report that the plants, together with another 8 plants in the area financed from other sources, have left large stretches of

the local streams with little or no water for much of the year. Such practices are far from the EU Water Framework Directive’s requirements to prevent deterioration of the status of all bodies of surface water,<sup>31</sup> and appear to have been implemented without any cumulative impact assessment.<sup>32</sup>

Erste has a policy on responsible financing for the energy sector, which states that hydropower and other renewables need to comply with the World Commission on Dams (WCD) Framework and international conventions such as the European Union Water Framework Directive, and have no adverse effects on critical natural habitats or critical freshwater resources.<sup>33</sup> While the theory is good, reality appears to be somewhat different, particularly regarding the Water Framework Directive. More effort is therefore needed in implementation and monitoring of the policy.

### Greenfield hydropower plants financed by Erste

Country	Plant name	Status	River	Protected area (where applicable)
Serbia	Rečica	Operating	Bistrica	
	Crkvina	Operating	Bistrica	
	Vlasina 1-5/Gornje Gare 1	Operating	Vlasina	
	Vlasina 1-5/Gornje Gare 2	Operating	Vlasina	
	Vlasina 1-5/Donje Gare 1	Operating	Vlasina	
	Vlasina 1-5/Donje Gare 1	Operating	Vlasina	
	Vlasina 1-5/Donje Gare 1	Operating	Vlasina	
	Planska	Under construction	Josanica	
	Igrist	Under construction	Kolska reka	
	Marići	Under construction	Josanica	
	Kašići	Operating	Josanica	
	Vrgudinac	Operating	Nišava	

<sup>31</sup> See Article 4 of the Water Framework Directive: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32000L0060>

<sup>32</sup> Required under Annex III and IV of the Environmental Impact Assessment Directive <http://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32014L0052&from=EN>

<sup>33</sup> <https://www.erstegroup.com/en/about-us/responsibility/environment> The term “critical” is not defined in the document but is presumably similar to the EBRD’s definition in its 2014 environmental and social policy <http://www.ebrd.com/downloads/research/policies/esp-final.pdf>

	Lisina	Operating	Kločanica	Kučaj Beljanica Nature Park (Nominated Emerald site; Proposed National Park)
	Bistar	Operating	Jarensicka	
	Kneževići	Operating	Josanica	
	Dubak	Operating	Lesnička	
	Lanište	Under construction	Rupska reka	
	Dubočica 2	Operating	Dubočica	
	Vladići 1	Operating	Josanica	
	Samokovo	Operating	Gobeljska reka	
	Županj	Operating	Josanica	
	Darkovce	Operating	Darkovačka	
	Porečje	Operating	Zelenički potok	
	Jabukovik	Operating	Gradska	
	Kunara	Under construction	Brezanska	
	Krepoljin	Under construction	Mlava	
	<b>Montenegro</b>	Jara	Operating	Babinopoljska
Babino Polje		Operating	Babinopoljska	

## Unicredit Group

Italy's Unicredit Group has financed around 28 plants across southeast Europe, mostly in Serbia, Bosnia-Herzegovina and Bulgaria.

### Greenfield hydropower plants financed by Unicredit

Country	Plant name	Status	River	Protected area (where applicable)
<b>Bosnia-Herzegovina</b>	Kraljušćica 1	Operating	Kraljušćica	
	Zagradačka	Operating	Zagradačka	
	Velika Jasenica	Operating	Velika Jasenica	
	Mostarsko Blato	Operating	Listica	
	Žiraja	Operating	Žiraja (Usora)	
	Jelići	Operating	Vrbaš	



	Žeželja	Operating	Žeželja (Usora)	
<b>Bulgaria</b>	Tzankov Kamak	Operating	Vacha	Trigrad-Mursalica BG0002113
	Bistritsa A	Operating	Blagoevgradska Bistrica	
	Ravna - Rozino	Operating	Ravna	
	Cherepish	Operating	Iskar	Isakrski prolom Rjana BG0001042 Vrachanski Balkan BG0000166
	Pilatovets	Operating	Slaveevica	Zapaden Balkan BG0002002 Zapadna Stara planina i Predbalkan BG0001040
	Lenishta	Operating	Belishka	
	Energy Chiprovtsi	Operating	Chiprovska	Zapadna Stara Planina i Predbalkan BG0001040
	Zlataritsa	Operating	Zlataritsa	
<b>Croatia</b>	Ilovac	Operating	Kupa	Kupa Natura 2000
	Badljevina	Operating	Bijela	
<b>Serbia</b>	Pržinci	Operating	Korbevačka	
	Pročovci 1	Operating	Tripusnica	
	Rogopeč 1	Under construction	Brusnička; Dajička	Golija Nature Park
	Bare	Operating	Vlasina	
	Duavica	Planned	Korbevačka	
	Pročovci 2	Operating	Tripusnica	
	Vica	Operating	Toplica	
	Krstići	Operating	Vlasina	
	Zvonce	Under construction	Rakitska	
	Prisoje	Operating	Tripusnica	
<b>Slovenia</b>	Avče	Operating	Soča	

Unicredit has a set of Environmental and Social Standards related specifically to water infrastructure.<sup>34</sup> These require that Unicredit financing for concerning Water Infrastructure development must be consistent with the International Finance Corporation (IFC) Performance Standards and the Environmental, Health and Safety (EHS) Guidelines of the World Bank Group, as well as the Equator Principles and the best practice framework of the World Commission on Dams (WCD). All companies

<sup>34</sup> <https://www.unicreditgroup.eu/en/a-sustainable-bank/our-capitals/esg-approach/policies-and-guidelines.html>

have to follow the core labour standards, as identified in the International Labour Organization (ILO) conventions, and have to comply with the UN Convention on the Law of the Non-navigational Uses of International Watercourses.

UniCredit also has some exclusion zones in its policy: It commits not to finance Water Infrastructure development counterparts which directly support:

- Operations in UNESCO World Heritage Sites
- Operations in or directly affecting areas officially protected for conservation purposes (i.e., IUCN I-IV protected areas), or those proposed for such designation;
- Operations where there are reliable reports of human rights violations;
- Operations in or directly affecting wetlands on the Ramsar List;
- Operations in or directly affecting Primary Tropical Moist Forests, High Conservation Value Forest or Critical Natural Habitats, where significant degradation or conversion is involved;
- Operations where it is evident that the counterpart has not achieved free, prior and informed consent from affected Indigenous Peoples and undertaken free, prior and informed consultation with the affected communities in order to facilitate their informed participation;
- Projects which are not in compliance with the World Bank policies on the Safety of Dams.

Given that six of its projects in the Balkans appear to be in protected areas, it appears that the bank has a good basis for action but that its implementation needs to be improved.

### Hydropower plants financed by other prominent banks

Bank	Country	Plant name	Status	River	Protected area (where applicable)
Intesa	Albania	Lure 1	Operating	Molla lura	Kurora Lures-Kunore-Valmore-Zall-Gjocaj Nominated Emerald site
		Lure 2	Operating	Molla lura	
		Lure 3	Operating	Molla lura	
		Prele	Operating	Urake	
		Lapajt	Operating	Caje	
	Croatia	Dabrova dolina 1	Operating	Mrežnica	Mrežnica Natura 2000
		Fajerov Mlin	Under construction	Glina	

	<b>Serbia</b>	Beli Kamen	Operating	Crni Rzav, Ribnica	Zlatibor Nature Park
		Lisina (also: Lisina Barska)	Operating	Barska reka i Lisinska	
		Radošice	Operating	Radošička	
<b>United Bulgarian Bank</b>	<b>Bulgaria</b>	Iskra	Operating	Iskar	
		Loziata 1	Operating	Vacha	
		Loziata 2	Operating	Vacha	
		Luna	Operating	Botunya	Bilernicite Natura 2000
		Tamrush/Tumrush	Operating	Tumrushka	
		Treshtena	Operating	Treshtena	Zapadna Stara Planina i Predbalkan BG0001040, Zapaden Balkan BG0002002
		Ustrem and Srem	Operating	Tundzha	Jdreloto na reka Tundja BG0000217 Sakar BG0002021
		Mugla	Operating	Muglenska	
		Lesitchevo 1	Operating	Topolnitsa	
		Lesitchevo 2	Operating	Topolnitsa	
Rosa	Operating	Levi Iskur			
<b>Raiffeisen</b>	<b>Albania</b>	Sasaj	Operating	Kalasa, Tatzati	
		Topojan 2	Operating	Luma	Korab-Koritnik Nature Park
		Pobreg	Operating	Luma	
		Peshku	Operating	Lene, Theken, Licone	Mali me Gropa-Bizë-Martanesh Protected Landscape
		Lengarica	Operating	Lengarica	Bredhi i Hotovës-Dangelli National Park
		Radove	Operating	Carshove	Bredhi i Hotovës-Dangelli National Park
		Bele 1	Operating	Luma	
	Bishnica 1	Operating	Bishnica		

	<b>Bulgaria</b>	Tzankov Kamak	Operating	Vacha	Trigrad-Mursalica BG0002113	
		Khodzovo	Operating	Pirinska Bistrice	Sreden Pirin - Alibotush BG0001028	
<b>CIBank</b>	<b>Bulgaria</b>	Botunya	Operating	Botunya	Vrachanski Balkan Bilernicite	
		Stankova reka	Operating	Stankova reka		
		Elena	Operating	Ogosta		
		Davidkovo 2	Operating	Davidkovo	Dobrostan BG0002073, Rodopi sredniBG0001031	
		Kamenitsa	Operating	Kamenitsa	Reka Mesta BG0001021	
		Banite	Operating	Malka Arda		
		Eli Dere	Operating	Chepinska	Yadenitsa BG0001386	
<b>Societe Generale</b>	<b>Albania</b>	Ternove	Operating	Liqeni i Zi	Liqeni i Zi (Martanesh) Natural Monument	
		Dardhe 1	Operating	Dardhe	Morava Proposed Emerald site	
	<b>Bulgaria</b>	Tzankov Kamak	Operating	Vacha	Trigrad-Mursalica BG0002113	
		<b>Macedonia</b>	Zelengrad	Operating	Zelengradska	Osogovo Mountains nominated Emerald site
	Stanechka 1		Operating	Stanechka		
	Golemo Ilino		Operating	Golemoilinska		
	Brza Voda 1		Operating	Brza Voda	Sar Planina nominated Emerald site	
	Brza Voda 2		Operating	Brza Voda	Sar Planina Prime Butterfly Area	
	<b>Serbia</b>	Gramada	Operating	Crnovrska reka		
	<b>Prva Banka</b>	<b>Montenegro</b>	Bistrice (Berane)	Operating	Bistrice	Lim river nominated Emerald site
			Jezerštica	Operating	Bistrice	
			Spaljevići 1	Operating	Sekularska rijeka	
			Orah	Operating	Sekularska rijeka	
Rmuš			Operating	Sekularska rijeka		



The projects financed by commercial banks have mostly been small hydropower plants, which may seem like a low risk given their size and the almost guaranteed profit due to feed-in tariffs. However commercial banks need to be aware that these are often some of the most controversial investments and are hotly contested by local communities and environmental groups. This means that investment in this sector poses a reputational risk for the banks, and as the level of controversy grows around hydropower plants in the region, the financial risk for investors is also growing.

Therefore commercial banks operating in the region need to review their environmental and social standards to ensure that small hydropower plants in protected and high natural value areas are off-limits as well as requiring a full environmental impact assessment and public consultations for all greenfield projects. Banks also need to find ways to disclose their planned investments in hydropower plants and other controversial projects before they occur, in order to allow the public to bring forward information which may help the bank to assess the project risks.

### **Multilateral development banks**

The international financial institutions claim to be standard-setters and often enable to projects to proceed which would otherwise not find funds.

We identified 82 hydropower plants financed by MDB financing<sup>35</sup> since 2005. This does not include projects where financing has not been approved yet, nor projects for which financing has been cancelled.<sup>36</sup> A further 22 projects were financed by the EIB through financial intermediaries but the exact projects could not be traced with certainty. Altogether, these are worth EUR 727 million, compared to EUR 819 million identified in 2015. This lower figure is mostly due to the fact that the EBRD cancelled its loan for the 68 MW Boskov Most in Macedonia as well as some loans for smaller projects.

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<sup>35</sup> Some projects receive financing from more than one MDB

<sup>36</sup> These include projects which were financed through financial intermediaries which have been traced with certainty, including those financed through the EBRD's WeBSEFF I and II and those financed by the EIB for which an environmental impact assessment was carried out and disclosed by the bank on request - Ilovac in Croatia and Tearce 97-99 in Macedonia.

The distribution of financing among MDBs is as follows:

Multilateral development bank	Number of plants	Amount of financing identified (EUR million)
EBRD - direct lending <b>and</b> lending through intermediary banks	61	126
EIB - lending for individual projects	11	445
EIB - financial intermediaries	22	22 <sup>37</sup>
World Bank Group (IFC and MIGA)	10	131
<b>Total</b>	<b>104</b>	<b>724</b>

Looking at protected areas, we find at least 37 projects supported by MDBs which are either in an existing or planned protected area or area of internationally recognised biodiversity value.

#### **Number of greenfield projects identified financed by MDBs in conflict with protected areas**

MDB financed greenfield projects identified in conflict with protected areas (excludes planned and cancelled MDB projects)	EBRD	EIB	IFC	MIGA	TOTAL
Inside protected areas and IPAs, IBAs and PBAs	29	5	1	2	37

<sup>37</sup> 2010-2017. This does not include the plants which we were able to identify concretely and include in the general calculations - Tearce 97-99 in Macedonia and Ilovac in Croatia.

## The EBRD



*The EBRD has become more careful in recent years but it is still considering financing a hydropower plant at Babino Selo on the upper Vrbas in Bosnia-Herzegovina, among others. Photo: Pippa Gallop*

The European Bank for Reconstruction and Development (EBRD) has been the most important actor in terms of the number of projects financed - at least 61 greenfield plants financed with EUR 126 million.<sup>38</sup> These have all been relatively small projects except the 20 MW Vranduk plant on the river Bosna, as its plans to finance the larger Ombla and Boskov Most plants were cancelled in 2013 and 2017 respectively.

29 plants financed by the EBRD since 2005 are in existing or planned protected areas or internationally recognised areas of high biodiversity value.<sup>39</sup>

Our previous report indicated 21 hydropower plants financed by the EBRD, planned, being built or in operation in existing or planned protected areas or internationally

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<sup>38</sup> This includes projects financed through financial intermediaries. There may be additional projects that have not traced as information was only found about the Western Balkans' WeBSEFF programme and to some extent the BEERCL credit line in Bulgaria.

<sup>39</sup> Some, such as some of the Vez Svoghe plants in Bulgaria, are on the boundaries of the areas. Given the importance of waterways and the danger of fragmentation of habitats, we have included these plants as being inside the areas. The exception is one plant on the lower edge of an Important Plant Area, where we considered that there was unlikely to be any impact on the target species.

recognised areas of high biodiversity value. Out of these 21, we learned through follow-up communication with the EBRD that loans for five plants have been cancelled.<sup>40</sup> Also, the EBRD has informed us that one plant - Kamenička Reka - is located in a biodiverse rich area (300 m from a proposed Emerald site) but not inside and not clearly impacting on the protected area.<sup>41</sup>

The increase in the number of EBRD-financed plants in protected areas comes from tracing indirect EBRD financing for plants like Dabrova Dolina in Croatia but also from improved data for Bulgaria.

All the EBRD- and EIB-financed plants in protected areas are relatively small, however those we have examined are having quite serious impacts, as outlined in our recent report Broken Rivers which examined plants in Macedonia, Albania and Croatia.<sup>42</sup> They are affecting endemic and endangered species such as the Prespa trout, and in some cases such as Rapuni in Albania they have also hampered local communities' water use. In most cases, flagrant violations of national laws and international financial institutions' standards are visible and include blocking fish passes, releasing insufficient or no water at all downstream, and creating significant erosion with access roads.

As a positive development, the EBRD has already reacted to our findings on the Albanian plants Ternove and Rapuni 1 and 2 by sending a monitoring mission and confirming some of our findings. It remains to be seen whether the findings about the plants in Macedonia will trigger action from the banks to mitigate the harm already done and prevent any more such projects being financed.

Another example of what can happen - whether an area is protected or not - is the Kraljušćica 1 plant near Konjic in Bosnia-Herzegovina, financed by the EBRD through Unicredit as a financial intermediary.<sup>43,44</sup> Complete drying out of the river bed at the plant has been reported by local fishermen and captured on video by Zeleni Neretva.<sup>45</sup>

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<sup>40</sup> Financing has been cancelled for four small hydropower plants in Macedonia: Zrnovska reka 1, Zrnovska reka 2, Estericka reka, Kadina reka plus the 68 MW Boskov Most plant in the Mavrovo National Park, also in Macedonia. In addition the remaining four plants of the Vez Svoghe cascade in Bulgaria appear to have been suspended by the developer. In addition, the EBRD confirmed that it is not planning to finance the Zagreb na Savi cascade in Croatia.

<sup>41</sup> Furthermore, at Gradecka reka in Macedonia, the river at the intake location forms the boundary of IPA Plachkovica. This means that the left bank abutment of the intake is in the IPA. Given that this area is designated for plants, that the river is on its lower end, and that the hydropower plant does indeed not appear to stretch significantly into the IPA we have also decided to change its classification this time.

<sup>42</sup> <https://bankwatch.org/publication/broken-rivers-impacts-european-financed-small-hydropower-plants-pristine-balkan-landscapes>

<sup>43</sup> [http://www.webseff.com/index.php?option=com\\_content&view=article&id=329:hydropower-map&catid=7&lang=en&Itemid=331](http://www.webseff.com/index.php?option=com_content&view=article&id=329:hydropower-map&catid=7&lang=en&Itemid=331)

<sup>44</sup> Other greenfield plants mentioned in our 2015 study as possibly receiving EBRD and EIB financing were Kruševo and Zeleni Vir and Vinac but these loans are not going ahead.

<sup>45</sup> <https://www.youtube.com/watch?v=fToC-pXgypk>,  
<https://www.facebook.com/zelenineretvakonjic/videos/vb.1172251646207744/1374524555980451/?type=2&theater>,



## Greenfield hydropower plants financed by the EBRD

Country	Plant name	Status	River	Protected area (where applicable)	Financial intermediary (where applicable)
Albania	Verbe Selce 1	Operating	Verbe		
	Verbe Selce 2	Operating	Verbe		
	Rrypa (Rrupe)	Operating	Benji		
	Rapuni 1	Operating	Rapuni	Shebenik-Jabllanicë	
	Rapuni 2	Operating	Rapuni	Shebenik-Jabllanicë	
	Cerruja 1	Operating	Benji		
	Cerruja 2	Operating	Benji		
	Ternove	Operating	Liqeni i Zi	Liqeni i Zi (Martanesh) Natural Monument	
Bosnia-Herzegovina	Kraljuščica 1	Operating	Kraljuščica		Unicredit
	Brestavni Potok	Operating	Desna		Not identified
	Vranduk	Under construction	Bosna		
Bulgaria	Prokopanik	Operating	Iskar		
	Svrazhen	Operating	Iskar	Vrachanski Balkan, Iskarski Prolom-Rjana	Not identified
	Lakatnik	Operating	Iskar	Vrachanski Balkan	Not identified
	Opletnya	Operating	Iskar	Vrachanski Balkan	
	Tserovo	Operating	Iskar		
	Blagoevgradska Bistritsa 1-8	Operating	Blagoevgradska Bistritsa		Allianz Bank Bulgaria
	Treshтена	Operating	Treshтена	Zapadna Stara Planina i Predbalkan BG0001040, Zapaden Balkan BG0002002	United Bulgarian Bank
	Cherna Mesta	Operating	Cherna Mesta		DSK Bank
	Byala Mesta	Operating	Byala Mesta		DSK Bank
	Kaleto	Operating	Iskar		Not identified
	Gashnya	Operating	Gashnya	Rodopi Zapadni	Not identified

<https://www.klix.ba/vijesti/bih/konjic-ribari-upozoravaju-na-potpuni-nestanak-rijeke-nakon-izgradnje-elektrana/170612136>

				BG0001030	
	Loziata 1	Operating	Vacha		United Bulgarian Bank
	Lesitchevo 1	Operating	Topolnitsa		United Bulgarian Bank
	Lesitchevo 2	Operating	Topolnitsa		United Bulgarian Bank
	Tamrush (Tumrush)	Operating	Tumrushka		United Bulgarian Bank
	Katuntsi (Katunci)	Operating	Pirinska Bistritza	Sreden Pirin - Alibotush BG0001028, Melnishki Piramidi	Union Bank
	Churekovska	Operating	Churekovska		Not identified
	TAS	Operating	Vlahinska	Pirin buffer BG0002126 Kresna - Ilindentsi BG0000366	Not identified
<b>Croatia</b>	Dabrova dolina 1	Operating	Mrežnica	Mrežnica Natura 2000	Privredna Banka Zagreb (Intesa)
<b>Macedonia</b>	Kazani	Operating	Semnica	Pelister National Park, nominated candidate Emerald site, Baba Mountain Prime Butterfly Area	Not identified
	Jablanica	Operating	Jablanica	Proposed National Park Nominated Emerald site	
	Kranska reka	Operating	Kranska	Baba Mountain Prime Butterfly Area	
	Tresonecka	Operating	Tresonecka	Mavrovo National Park	
	Zelengrad	Operating	Zelengradska	Osogovo Mountains nominated Emerald site	Ohridska banka (Societe Generale)
	Gradecka reka	Operating	Gradecka reka		
	Krkljanska reka	Operating	Krkljanska	Osogovo Mountains nominated Emerald site	
	Kriva reka 2	Operating	Kriva		

Brajcino 1	Operating	Brajcinska	Pelister National Park	
Pesocanka 1	Operating	Pesocanska	South Stogovo proposed Nature Reserve for scientific research	
Galicka reka	Operating	Galicka	Mavrovo National Park and nominated Emerald Site	
Brajcino 2	Operating	Brajcinska	Pelister National Park, Baba Mountain Prime Butterfly Area <sup>46</sup>	
Brza voda 2	Operating	Brza Voda	Sar Planina Prime Butterfly Area	Ohridska banka (Societe Generale)
Brza voda 3	Operating	Brza Voda	Sar Planina Prime Butterfly Area	Not identified
Kamenicka reka	Operating	Kamenicka		
Brbusnica	Operating	Brbusnica	Important Plant Area	
Selecka	Operating	Selecka	Crn Drim Important Plant Area	
Pesocanka 2	Operating	Pesocanska	South Stogovo proposed Nature Reserve for scientific research	
Patiska reka	Operating	Patishka	Jasen Special Protected Area, Jakupica Nominated Emerald site, Important Bird Area, Important Plant Area	
Belicka	Operating	Belicka	Ilinska Mountain Important Plant	Not identified

<sup>46</sup> After examining this, a consultant engaged by the EBRD concluded it is in the PBA but not the National Park. However using the following coordinates we conclude that Intake 1 lies inside the National Park. Intake 2 lies directly on the boundary of the national park. Channel 1 lies inside the national park. Channel 2 lies outside the national park. The powerhouse lies outside the national park: Powerhouse: 40.911305, 21.171411; Intake Brajcinska: 40.917946, 21.194667; Intake Stanisar: 40.919822, 21.182195

				Area	
<b>Montenegro</b>	Bistrica-pritoka Ljubovidje	Under construction	Bistrica		
<b>Serbia</b>	Marići	Under construction	Josanica		
	Šutanovina	Operating	Gobeljska reka		
	Krstići	Operating	Vlasina		Unicredit
	Pročovci 2	Operating	Tripusnica		Unicredit
	Vladići	Operating	Josanica		
	Bare	Operating	Vlasina		Unicredit
	Gramada	Operating	Crnovrska reka	Stara Planina Nature Park, nominated Emerald site	Societe Generale
	Velež	Operating	Samokovska		
	Prisoje	Operating	Tripusnica		Unicredit
	Pročovci 1	Operating	Tripusnica		Unicredit

After the EBRD’s 2017 announcement that it had pulled out of the Boskov Most project in Macedonia and its consequent engagement with the Macedonian government to devise a national level hydropower master plan,<sup>47</sup> there was hope that the EBRD had changed its approach and started concentrating more on the governance context before taking new individual projects on board.

However, during the last two years the EBRD has started considering financing for two controversial projects in Bosnia and Herzegovina. It is considering support for at least some plants on the Neretvica cascade, which is not legally protected but is home to species which qualify it as “critical habitat” according to the bank’s classification.<sup>48</sup> It is also considering financing for Babino Selo, which appears to be in a Danube Salmon (*Hucho hucho*) habitat, but is not legally protected. It is true that the EBRD is taking cautious steps, doing additional studies and disclosing early versions of the EIA studies done. However, it is still unclear why it is engaging with these projects where even the

<sup>47</sup>

<http://www.ebrd.com/cs/Satellite?c=Content&cid=1395255607298&d=Mobile&pagename=EBRD%2FContent%2FContentLayout>

<sup>48</sup>

<http://www.elektroprivreda.ba/upload/documents/kapitalne%20investicije/SHP%20NERETVICA%20Critical%20Habitat%20Assessment.pdf>



EBRD itself has determined that the Neretvica is a critical habitat and the upper Vrbas is likely to be.<sup>49</sup>

In 2018-9 the EBRD will be revising its Environmental and Social Policy and its Public Information Policy. The bank's existing policies from 2014 already contain numerous useful provisions and since then it has also issued Guidance Notes on hydropower projects and on implementing Performance Requirement 6 on biodiversity.<sup>50</sup> However it is clear that improvements are still needed in environmental assessment and information disclosure on loans through financial intermediaries and in keeping highly valuable areas completely out of bounds for hydropower development.

### **The EIB**

The European Investment Bank (EIB) has provided the largest amount of financing by volume - EUR 445 million for 11 plants. In addition it has provided EUR 22 million for 22 plants through financial intermediaries which could not be assigned with certainty to particular projects and are not included in the table below.

Five of the plants appear to be in existing or planned protected areas or internationally recognised areas of high biodiversity value. The Tearce plants in Macedonia and Ilovac plant in Croatia featured in Bankwatch's recent report Broken Rivers.<sup>51</sup> A field visit in September 2017 confirmed that the Bistrica river above the highest intake (Tearce 97), located in a nominated Emerald zone, is in pristine, natural condition with well-developed riparian vegetation. The presence of adult specimens of the sensitive *Limnius volckmarii* (Coleoptera) additionally indicate favourable, undisturbed conditions. However the Tearce 97 plant was violating residual flow requirements when visited in September 2017, while the other two plants were not working due to low water levels. The worst condition concerning biological diversity and ecological status (poor) was noted below the intake for Tearce 99, where there was a drastic reduction of aquatic invertebrate species.

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<sup>49</sup> [http://www.donji-vakuf.ba/attachments/article/161/HPP%20Babino%20Selo\\_ESSS\\_final\\_BHS\\_20160401.pdf](http://www.donji-vakuf.ba/attachments/article/161/HPP%20Babino%20Selo_ESSS_final_BHS_20160401.pdf), <http://www.elektroprivreda.ba/eng/page/small-hydro-power-plant-on-neretvica>; correspondence with the EBRD on Babino Selo, 25 January 2018

<sup>50</sup> <http://www.ebrd.com/who-we-are/our-values/environmental-and-social-policy/implementation.html>

<sup>51</sup> <https://bankwatch.org/publication/broken-rivers-impacts-european-financed-small-hydropower-plants-pristine-balkan-landscapes>



*Stone crayfish (Austropotamobius torrentium), an EU priority species found above the intake of the Kamena Reka plant, financed by the EIB. The water weirs pose a threat to continuity of its habitat.  
Photo: © Andrey Ralev*

## Greenfield hydropower plants financed by the EIB

Country	Plant name	Status	River	Protected area (where applicable)	Financial intermediary (where applicable)
Bosnia-Herzegovina	Vranduk	Under construction	Bosna		
Bulgaria	Eli Dere	Operating	Chepinska	Yadenitsa BG0001386	
Croatia	Ilovac	Operating	Kupa	River Kupa Natura 2000	Zagrebačka Banka (Unicredit)
Macedonia	Tearce 97 (Bistrica 1)	Operating	Bistrica	Shar Planina nominated Emerald site, proposed National Park, Important Plant Area, Prime Butterfly Area	Macedonian Bank for Development Promotion
	Tearce 98 (Bistrica 2)	Operating	Bistrica	Shar Planina nominated Emerald site, proposed National Park, Important Plant Area, Prime Butterfly Area	Macedonian Bank for Development Promotion
	Tearce 99 (Bistrica 3)	Operating	Bistrica	Shar Planina proposed National Park, Important Plant Area, Prime Butterfly Area	Macedonian Bank for Development Promotion
	Lipkovo/Kamena reka	Operating	Kamena		Macedonian Bank for Development Promotion
Slovenia	Krško	Operating	Sava		
	Brežice	Test operations	Sava		
	Blanca	Operating	Sava		
	Avče	Operating	Soča		

## The World Bank Group (IFC and MIGA)

The World Bank's International Finance Corporation (IFC) and Multilateral Investment Guarantee Agency (MIGA) have supported 10 greenfield hydropower plants in Albania with loans, guarantees or equity stakes, either directly or through financial intermediaries, including Ashta 1 and 2 and Lengarica. Three of the plants appear to be

in protected areas. In addition the IFC has provided advisory services for 13 plants, including the Morača dams in Montenegro, Cebren and Galište in Macedonia and the Gjader Cascade in Albania.

### Greenfield hydropower plants financed by the World Bank Group

Country	Plant name	Status	River	Protected area (where applicable)	Financial intermediary (where applicable)	
Albania	Ashta 1 (MIGA guarantee)	Operating	Drin	Buna River-Velipoja Protected Landscape and Nominated Emerald site		
	Ashta 2 (MIGA guarantee)	Operating	Drin	Buna River-Velipoja Protected Landscape and Nominated Emerald site		
	Lengarica (IFC equity)	Operating	Lengarica	Bredhi i Hotovës-Dangelli National Park		
	Mati 1 (IFC equity)	Planned	Mati			
	Mati 1i (IFC equity)	Planned	Mati			
	Mati 2 (IFC equity)	Planned	Mati			
	Bistrica 3 (IFC)	Operating	Bistrica			Credins Bank
	Hurdhas 2 (IFC)	Under construction	Perroi Hurdhas			Credins Bank
	Helmes 1 (IFC)	Operating	Kozeli			Credins Bank
	Helmes 2 (IFC)	Operating	Kozeli			Credins Bank

## **Lending through commercial bank intermediaries: Are the EBRD and EIB improving their practices?**

Outside of Slovenia, the EIB has been involved in financing Balkan hydropower projects mainly via financial intermediaries. The EBRD also does much of its financing through commercial banks.<sup>52</sup> Such lending helps them to reach a larger number of smaller companies. However, it also prevents the public from knowing about investments and creates unclarity about responsibility for making sure that environmental standards are adhered to.

In general, the banks do not disclose the final beneficiaries of lending through financial intermediaries. This prevents the public from raising concerns in a timely manner but also increases the reputational and financial risks for both the EBRD and EIB and the intermediary banks.

There are some minimal provisions in the banks' environmental and social policies requiring disclosure of environmental information on projects, but the EBRD provisions mentions only environmental impact assessments, and only "where possible". In most cases, no such study is carried out.

Bankwatch carried out two surveys during 2017,<sup>53</sup> drawing the Banks' attention to gaps in implementation of their own transparency standards. Combined with the *Broken Rivers* study that featured three intermediated EIB projects as well as the EIB's own analysis of its intermediated financing,<sup>54</sup> this should create a case for the Banks to change their policies. At minimum the MDBs need to disclose the projects to which they are on-lending, or to effectively oblige their intermediaries to do so, but also to require full environmental impact assessments.

In correspondence with the EIB, it seems that the bank, although acknowledging the issue, still places an emphasis not on its own standards,<sup>55</sup> but on the national legislation and competences of the local authorities. It appears to believe that this should be enough to ensure sound environmental and social performance in its projects.<sup>56</sup> This creates a dangerous precedent in terms of not following its own rules,

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<sup>52</sup> As shown above the IFC also lends through financial intermediaries. However as the IFC has lent for hydropower so far only in Albania we have not yet gathered much experience on how well its policies are implemented by commercial banks in the region..

<sup>53</sup> On the EIB <https://bankwatch.org/sites/default/files/outsourcing-accountability.pdf>

On the EBRD <https://bankwatch.org/wp-content/uploads/2017/05/briefing-EBRD-FinancialIntermediaries-05May2017.pdf>

<sup>54</sup> See for instance <http://www.eib.org/infocentre/publications/all/evaluation-of-the-eib-intermediated-loans-in-acp>

<sup>55</sup> EIB's Environmental and Social Handbook requires requires the intermediary or fund manager to publish the environmental information about the project

<sup>56</sup> Correspondence with the EIB, 8 March 2017



which clearly oblige the EIB to require intermediary banks to disclose environmental information about projects.

Such thinking is also naive and dangerous in terms of assuming that things work the same way in different jurisdictions. Within the EU, at least the European Commission and the European Court of Justice can intervene in case national legal systems fail to uphold EU law. However in the Balkans, as well as in many other regions, there is growing evidence of weak environmental governance.<sup>57</sup>

The upcoming development of the EIB's Lending Guidelines on Hydropower and Standards for Financial Intermediaries will be an opportunity for the EIB to revise its position on this issue.

The EBRD has in recent years started disclosing information on intermediated hydropower plant financing in the Balkans on request, which is a major step forward in transparency and accountability of such investments. Such information needs to be available before the plants are financed, however, in order to ensure that excessive environmental damage is avoided. The EBRD's recognition of the need for transparency in intermediated investments now needs to be reflected in its Environmental and Social Policy and Public Information Policy, whose revision begins this year.

In addition to individual MDB financing, the Green for Growth Fund (GGF), set up by the EIB and KfW, with financing from the other MDBs mentioned above, has also been financing hydropower plants. It financed Lengarica directly but mostly acts through financial intermediaries, whose project data it is unwilling to share because of being bound by commercial confidentiality. In 2015 it shared with us the information that it had supported up to 10 small hydropower projects in the region however more recent informal discussions with GGF staff suggest that it has hardly financed any hydropower projects since then.

### **Other public funding**

In 2015 we reported that Germany's KfW had been the most active source of public financing beyond the MDBs. Deutsche Investitions-und Entwicklungsgesellschaft (DEG), which is part of KfW, is an investor in the consortium PCC Hidro Dooel which constructed the Galicka Reka, Patiska Reka, Brajcinska Reka and Gradecka Reka plants in Macedonia, all of which are in protected areas. KfW has also approved financing for

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<sup>57</sup> See for instance Peter J Nelson: EIA/SEA of hydropower projects in Southeast Europe: Meeting the EU standards, WWF and South East Europe Sustainable Energy Policy, November 2015 <http://seechangenetwork.org/wp-content/uploads/2015/11/EIASEA-of-hydropower-projects-in-Southeast-Europe-%E2%80%93-Meeting-the-EU-standards.pdf>

the Vrilo plant near Livno in Bosnia and Herzegovina, which is on the Livno Polje Ramsar Site. Between 2015 and 2017 KfW confirmed however that it had not signed any new greenfield projects in the Balkans, only a rehabilitation project in Albania.

Another public fund of note is Montenegro's Investment-Development Fund (IRF) which has financed several small hydropower plants, one through an EIB credit line (see section on Montenegro). The exact number is not known as one of the loans, for EUR 5 million, covered various plants built by Hidroenergija Montenegro d.o.o.

Given China's increasing interest in the Balkans in recent years, and its interest in financing several coal power plants, it is to be expected that its state policy banks might also be interested in at least the larger hydropower plants. So far, one commercial bank from China - Bank of China - has financed the Kozjak plant in Macedonia but for other projects there have been no commitments on paper as yet. Chinese companies also showed interest in the Vardar cascade in Macedonia, however this project does not look like it will go ahead any time soon.

In Bosnia-Herzegovina, the project sponsor of the Ulog project on the Upper Neretva, EFT, has stated that it is in negotiations with the China Development Bank regarding financing,<sup>58</sup> however the fate of the project, on the upper Neretva, is uncertain due to landslides on the site which have led to a re-think of the project location. Chinese companies have also expressed interest in the controversial Dabar<sup>59</sup> hydropower plant, part of the Gornji Horizonti complex which would move water from the Neretva catchment to the Trebišnjica, and Buk bijela<sup>60</sup> on the River Drina, as well as the lesser-known Trn and Laktaši plants on the river Vrbas near Banja Luka.<sup>61</sup>

Our experience so far shows that Chinese companies and banks are looking to expand in the region as part of China's One Belt One Road policy, aimed at linking Europe, Central Asia and China. In this context, China's policy banks are willing to lend money even for projects which are not highly profitable as long as they can secure state guarantees for their loans. Regarding environmental and social standards, China has some of its own rules such as the Green Credit Guidelines, and Chinese representatives in the region have stated that projects should be in line with EU standards. However they see it as the host government's role to ensure this, rather than the bank's. While this ought to be the case in theory, as discussed above in relation to the EIB, this clearly

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<sup>58</sup> <http://www.eft-group.net/themes/front/assets/annualreport/2013-2014.pdf>, <http://koncesije-rs.org/dokumenti/2014/Izvjestaj%20Komisije%20za%20Koncesije%20za%202014.god.pdf>

<sup>59</sup> Dongfang <https://www.glassrpske.com/drustvo/biznis/Kinezi-zele-da-grade-HE-Dabar/lat/237672.html>, China International Water and Electric Corporation (CWE) <https://www.energetskiportal.rs/kinezi-zainteresovani-za-izgradnju-he-dabar/>

<sup>60</sup> Dongfang <http://www.capital.ba/nezakonit-sporazum-sa-kinezima-o-izgradnji-he-buk-bijela/>, China National Aero-Technology International Engineering Corporation, <https://www.oslobodjenje.ba/vijesti/ekonomija-i-finansije/kinezi-grade-he-buk-bijela>

<sup>61</sup> <https://ba.ekapija.com/news/981385/kinezi-zainteresovani-za-izgradnju-hidroelektrana-na-vrbasu-u-laktasima>

does not work in the region in practice at the moment. China's apparently hands-off approach to meeting environmental and social standards is often cited by MDBs and other banks as a reason why it is better for them to be involved in projects in order to raise standards. For projects which are generally acceptable this may indeed be the case. However projects in highly sensitive areas will be problematic whoever finances them.

## **The role of the EU**

The EU has important direct influence on hydropower financing in the region through the EIB and its shareholding in the EBRD. However, beyond this, the EU's role differs between the EU Member States in the region and the six Western Balkans countries.

All the Western Balkans states aim at joining the EU in the coming years. Within the EU, the Water Framework Directive forms the cornerstone of decision-making on water bodies, complemented by environmental standards such as the Birds and Habitats Directives, EIA Directive, state aid (subsidies) legislation and renewable energy. Under the Water Framework Directive, EU Member States are required to ensure that water bodies (both surface and groundwater) achieve 'good status'. The Directive also requires that water bodies' status does not deteriorate. These all influence the development of hydropower and the European Commission and European Court of Justice can act as a corrective in case EU rules are breached.

For example, in the case of Bulgaria, the although basin management plans did include some measures to protect rivers from damaging projects, they were not observed or implemented, and in recent years a complaint and several annexes with additional information have been sent by NGOs to the European Commission.<sup>62</sup>

The non-EU countries in the region are all Contracting Parties in the Energy Community Treaty,<sup>63</sup> which requires them to apply certain EU energy and environment legislation. The Energy Community can be seen as a "light" version of the EU in the energy sector, which obliges countries to follow certain pieces of EU energy and environmental law, such as the Environmental Impact Assessment Directive and soon also the Strategic Impact Assessment Directive.

However the lack of inclusion of the Water Framework Directive and the Birds and Habitats Directives in the Energy Community acquis is a significant gap. This means that the Treaty does not so far ensure that the hydropower sector in the candidate countries has to live up to the standards required in the EU. This is particularly problematic given the region's status as a biodiversity hotspot.

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<sup>62</sup> <https://dams.reki.bg/Docs/Story>

<sup>63</sup> [www.energy-community.org](http://www.energy-community.org)

Additional action is needed by the EU in this field, either through the Energy Community Framework or within the accession process.

Since our 2015 report, the EC has steered a process for the development of a Regional Strategy for Sustainable Hydropower in the Western Balkans, which has brought together various stakeholders and highlighted the issue of hydropower sustainability in the region. The process is set to be finalised in 2018 with a set of Principles for Sustainable Hydropower Development and a list of priority rehabilitation and greenfield projects.<sup>64</sup>

The draft Principles are a positive move in underlining the need for increased attention to sustainability in the energy sector. However they cannot be a substitute for binding legislation. They also risk being undermined by the adoption of a list of priority greenfield projects which, given the lack of hydrological and ecological baseline data in the region, risks the EU promoting projects which later turn out not to be in line with EU legislation.

As the EU looks towards its 2030 climate and energy targets and seeks to ensure that they are adopted also in the Energy Community, it also needs to ensure that the countries do more to take advantage of their huge potential for energy savings and for diversification of their renewable energy mix. All the countries except Kosovo already have a substantial share of hydropower in their energy mix, and while it is useful for balancing intermittent renewables, a too high share of hydropower in the energy mix is also a liability during drought periods, as was clear in 2017 when energy companies across the region suffered heavy decreases in production.<sup>65</sup>

Such issues are expected to become even more serious in the future. The World Bank's 2014 Turn Down The Heat report, for example, says that there is an overall lack of hydrological data in the Western Balkan but that "*The available scientific studies suggest that across the Balkans water availability over the summer months is expected to decrease considerably by the end of the century. In the northern parts of the Balkans, however, spring and winter riverine flood risk is expected to increase. Results from a global study show severe decreases in annual discharge in the Western Balkans of more than 45 percent in a 4°C world.*"<sup>66</sup>

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<sup>64</sup> The draft Principles and the draft list of priority projects are available here:  
<https://www.wbif.eu/sectors/energy/sustainable-hydropower>

<sup>65</sup> <https://balkangreenenergynews.com/albania-launches-procedure-for-electricity-import-due-to-drought/>,  
<https://seenews.com/news/bosnias-epbih-expects-to-turn-to-net-loss-of-111-mln-euro-in-2017-594558>,  
<https://seenews.com/news/montenegros-hydro-power-output-nearly-halves-in-jan-aug-590982>,  
<http://vijesti.hrt.hr/403429/zbog-suse-znatno-pala-proizvodnja-struje-iz-domacih-hidroelektrana>

<sup>66</sup> World Bank. 2014. Turn Down the Heat: Confronting the New Climate Normal. Washington, DC: World Bank. License: Creative Commons Attribution—NonCommercial—NoDerivatives 3.0 IGO (CC BY-NC-ND 3.0 IGO), p.189

Between 2013 and 2016 when the Western Balkan countries adopted national renewable energy plans, they relied much too heavily on hydropower, which was problematic not only from a sustainability and climate vulnerability point of view but also from a realism point of view, as in spite of the construction frenzy of recent years, hardly any of them have managed to implement their plans, particularly regarding plants under 10 MW.<sup>67</sup> The EU and Energy Community need to make sure they don't repeat this mistake and that they come up with more balanced, sustainable and realistic energy and climate plans in the coming years.



*The new EIB-financed Brežice plant on the river Sava in Slovenia. Hydropower projects upstream in Slovenia have exacerbated riverbed erosion downstream in Croatia, lowering groundwater levels.  
Photo: Pippa Gallop*

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<sup>67</sup> By 2016, only Macedonia had fulfilled its planned installed capacity. Overall, across the region 1291 MW in small hydropower plants was planned but by the end of 2016, only around half of this (604 MW) had been installed. The difference for large power plants is less stark, with 7873 MW installed, out of a planned 8378 MW planned. Source: National Renewable Energy Action Plans and Energy Community Implementation Report 2017. <https://www.energy-community.org/implementation/IR2017.html>



## 3. Country profiles

### 3.1. Albania



*The upper Vjosa river in Albania, threatened by numerous dams. Photo © Roland Tasho*

We have identified 496 greenfield plants in Albania built since 2005 or still planned.<sup>68</sup> Of these, 105 are in protected areas. At least 110 plants have gone online since 2005, 46 of them in 2015-2017, the peak being in 2016 with 25 plants coming online. 285 plants are still actively planned, 55 in protected areas.

In 2013 when the government changed there was an initial hope that the new government would slow down the rate of building new plants. However, there is still a steady trend of plants coming online. In the last two years this has also included bigger plants such as Statkraft's 73 MW Banje plant on the Devoll river and Ayen As Energy's 34 MW Peshqesh and 74.6 MW Fangut plants in the Fan river basin. This is specific to Albania, as no other country in the region has managed to build so many bigger plants in the last few years (13 greenfield projects larger than 10 MW starting operation since 2005).

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<sup>68</sup> According to the National Agency for Natural Resources, Albania has awarded 183 concessions for no less than 524 hydropower plants since 2002. Source: <http://www.akbn.gov.al/situata-hidroenergjitike/>, accessed 27 February 2018. However some of these appear to have been for the rehabilitation of older plants and some are reported to have been cancelled, hence the difference in our number of greenfield projects and the number of plants covered by concessions issued.

In the last two years there have been significant legislative changes. A new renewable energy law was adopted, that finally includes renewable sources other than hydropower in the subsidies scheme<sup>69</sup> and established a more market-oriented mechanism for subsidising renewable energy. The EBRD is helping to develop the first solar-focused auction during the next year.<sup>70</sup> However feed-in tariffs for hydropower projects below 15 MW are still in place.<sup>71</sup>

In May 2017 a new law on protected areas was adopted that forbids building hydropower projects in national parks. This may lead to the cancellation of some concessions. This new development might have contributed to the cancellation of four concessions in the Shebenik-Jabllanice National Park<sup>72</sup> which is under extreme pressure from hydropower investors.<sup>73</sup> However it is still not stopping construction of three plants in Valbona National Park, that has sparked numerous protests and for which we have not been able to identify financiers yet.

As the last report focused on screening the overall list of plants, this time we focused on figuring out financing of the most recent additions to the Albanian hydropower fleet. In total 32 projects were financed by commercial bank loans. Of the international banks, the leading ones are Austria's Raiffeisen with seven projects and Italy's Intesa Sanpaolo with five projects financed. Out of those 32, 15 are in protected areas. Of 18 MDB-financed projects, 8 are financed by the EBRD and 8 by the IFC, with the two Ashta plants supported by a MIGA guarantee.

Small hydropower plants are usually owned by Albanian companies. The bigger plants tend to be financed by foreign companies. Also there is a trend that foreign companies are financed by banks from the companies' home countries, with the notable examples of the 32 MW Ashta plant, owned by Austria's Verbund AG and EVN, and financed by BAWAG P.S.K. Bank, while the Lura cascade (Italian owner Etea Rinnovabili) and Dardhe cascade (French company CNR) were financed by Intesa Sanpaolo and Societe Generale respectively.

We have also registered the biggest single commercial bank investment in the Western Balkans, a 178 EUR loan from the Turkish IsBank to Ayen Enerji for the Fan river cascade. This project was accompanied by a series of conflicts.<sup>74</sup> Given that the same project company is involved in the Pocem and Kalivac projects in the Vjosa valley, this

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<sup>69</sup> <http://www.res-legal.eu/search-by-country/albania/single/s/res-e/t/promotion/aid/feed-in-tariff-11/lastp/490/>

<sup>70</sup> <http://www.ebrd.com/news/2017/ebrd-and-albania-let-the-sunshine-in.html>

<sup>71</sup> <https://www.schoenherr.eu/publications/publication-detail/albania-finally-on-track-for-a-comprehensive-support-scheme-for-renewable-energy/>

<sup>72</sup> <https://invest-in-albania.org/hpp-concession-annulled-unesco-site/>

<sup>73</sup> <http://investigim.al/en/45-hidrocentralet-qe-rrezikojne-parkun-kombetar-te-librazhdit/>

<sup>74</sup> [http://www.ecoalbania.org/wp-content/uploads/2017/04/Water\\_conflict\\_study-2017-1.pdf](http://www.ecoalbania.org/wp-content/uploads/2017/04/Water_conflict_study-2017-1.pdf)

raises concerns that Turkish financiers, due to their lack of transparency and environmental and social standards, will ignore the environmental and social issues connected to the projects.



*Completely dry river bed at Rapuni 3 near Librazhd in Albania, January 2017. Photo: Pippa Gallop*

This comes as a particular concern after Bankwatch visited the Rapuni 1-2 and Ternove plants in 2017, and noted multiple issues with these EBRD-financed plants as well as the adjacent Rapuni 3-4 that was financed by the Greek NBG bank. Most of the issues were confirmed by the EBRD.<sup>75</sup> Given that these plants are supposed to be built under the European banks' stricter standards and enhanced monitoring, cases where comprehensive standards are lacking give even greater cause for concern.

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<sup>75</sup> <https://bankwatch.org/publication/broken-rivers-impacts-european-financed-small-hydropower-plants-pristine-balkan-landscapes>



Regarding plans for new big dams, the EBRD is the lead MDB administering a WBIF-financed study on Skavica cascade.<sup>76</sup> This means that the EBRD may finance the plant if the studies show that the project can be done according to its standards. In that case the loan will be at least EUR 202 million.

The hydropower lobby in Albania is strong, the last success being amending the RES law that already was in the process of adoption, via the negotiations mediated by the Energy Community Secretariat.<sup>77</sup> As the stakes are high (Albania being - still - a biodiversity hotspot) and the country is over-reliant on climate-sensitive hydropower, the international financiers need to take a balanced approach and support other kinds of renewables such as solar and wind. In this respect the EBRD's engagement to assist with solar auctions, mentioned above, is a positive development.

### 3.2. Bosnia and Herzegovina



*The entire river Drina - the most important river for the endangered Danube Salmon in terms of habitat length - is threatened by a series of dams. Photo: Matic Oblak*

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<sup>76</sup> <https://www.wbif.eu/wbif-projects/details?code=PRJ-ALB-ENE-008&ogtitle=Skavica%20Hydro%20Power%20Plant&ogdescription=PRJ-ALB-ENE-008&ogimage=Sites/website/projects/PRJ-ALB-ENE-008/Skavica%20HPP.bmp>

<sup>77</sup> <https://balkangreenenergynews.com/albania-adopts-law-promotion-energy-from-renewables/>

Of the 345 greenfield projects identified in Bosnia and Herzegovina built since 2005 or still planned, 84 are in protected areas. Around 65 plants have started operating since 2005. This is a large increase from the 19 we identified in 2015 and partly reflects improvements in our data but also the fact that from 2015-2017, 24 new plants were commissioned, 13 of them in 2015 alone.

We have identified 11 plants under construction, 193 actively planned, and 48 potential projects.<sup>78</sup> Of the actively planned projects, no fewer than 47 appear to be in current or officially proposed protected areas, which is all the more of concern considering that only a tiny percentage of Bosnia-Herzegovina's land area is legally protected.

No fewer than 33 of the actively planned projects are larger than 10 MW, which reflects a lack of willingness in Bosnia-Herzegovina's energy planning to focus on a few feasible projects.

Although the largest number of concessions was issued in 2006 (57 identified that are still valid, mostly in Republika Srpska), there has been a steady stream of concessions being issued ever since then, especially in the Federation, with the Central Bosnia Canton<sup>79</sup> and the Konjic area being particular hotspots.<sup>80</sup> We have identified a total of 188 concessions issued since 2005.

Confirmed or planned financing has been identified for 45 greenfield projects. Of these, 15 projects are accounted for by the EBRD's planned financing of at least part of the Neretvica cascade near Konjic. It is unclear whether this will go ahead as the river is home to species which qualify it as "critical habitat" according to the bank's classification, and a study carried out on this issue concluded that it would be difficult to implement the project in line with the bank's Environmental and Social Policy.<sup>81</sup>

Three projects have confirmed MDB financing – Vranduk, where EBRD and EIB financing is signed, the Brestovni potok plant financed by the EBRD through an unidentified financial intermediary and the Kraljušćica 1 plant near Konjic, also financed by the EBRD through Unicredit as a financial intermediary.<sup>82,83</sup> Drying out of

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<sup>78</sup> The status of the other 28 greenfield projects is unclear (25) or they have been cancelled (3).

<sup>79</sup> The concessions signed in Republika Srpska are more systematically documented than those in the Federation of Bosnia and Herzegovina, therefore some may have been missed, though we have had access to significantly more information than in 2015, thanks to Center for Environment and Eko-Gotuša.

<sup>80</sup> See Konjic District Spatial Plan 2013-2033

[http://www.konjic.ba/images/stories/prostorni\\_plan/NACRT%20PROSTORNOG%20PLANA%20OPCINE%20KONJIC%202013%20-%202033.g.pdf](http://www.konjic.ba/images/stories/prostorni_plan/NACRT%20PROSTORNOG%20PLANA%20OPCINE%20KONJIC%202013%20-%202033.g.pdf)

<sup>81</sup>

<http://www.elektroprivreda.ba/upload/documents/kapitalne%20investicije/SHP%20NERETVICA%20Critical%20Habitat%20Assessment.pdf>

<sup>82</sup> [http://www.webseff.com/index.php?option=com\\_content&view=article&id=329:hydropower-map&catid=7&lang=en&Itemid=331](http://www.webseff.com/index.php?option=com_content&view=article&id=329:hydropower-map&catid=7&lang=en&Itemid=331)



the river bed at the plant has been reported by local fishermen and captured on video by Zeleni Neretva.<sup>84</sup>

Of 15 projects with other public financing confirmed or planned, KfW is financing Janjići and Vrilo, the latter of which is in the Livno Polje Ramsar Site and has also been involved in some smaller projects via equity participation of its subsidiary DEG. The Investment and Development Bank of Republika Srpska (IRBRS) has also financed several projects, of which Bistrica 1-3 are partly in a protected area.

We were not able to trace much commercial bank financing in Bosnia-Herzegovina, but our findings suggest that Unicredit is the most active commercial financier, with around 7 projects identified.<sup>85</sup>

Our assessment is that 176 of the planned and potential projects do not have financing arranged yet, including some of the most problematic projects such as the Ljuta canyon cascade, the Upper Neretva plants, and the planned plants on the upper, mid- and lower Drina. For some of the most hotly contested projects such as Kruščica and Buna, we have been unable to identify financiers, while as we pointed out in 2015, Slovenia's Interenergo - which is behind the Medna Sana project - uses sources from within the company for financing rather than external ones.

There is some interest from Chinese banks in Bosnia and Herzegovina, however there are no commitments on paper yet. The project sponsor of the Ulog project on the Upper Neretva, EFT, has stated that it is in negotiations with the China Development Bank regarding financing,<sup>86</sup> however the fate of the Ulog project is uncertain due to landslides on the site which have led to a re-think of the project location. Chinese companies have also expressed interest in the controversial Dabar<sup>87</sup> hydropower plant, part of the Gornji Horizonti complex which would move water from the Neretva

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<sup>83</sup> Other greenfield plants mentioned in our 2015 study as possibly receiving EBRD and EIB financing were Kruševo and Zeleni Vir and Vinac but these loans are not going ahead.

<sup>84</sup> <https://www.youtube.com/watch?v=fToC-pXgypk>, <https://www.klix.ba/vijesti/bih/konjic-ribari-upozoravaju-napotpuni-nestanak-rijeke-nakon-izgradnje-elektrana/170612136>, <https://www.facebook.com/zelenineretvakonjic/videos/vb.1172251646207744/1374524555980451/?type=2&theater>

<sup>85</sup> A loan for Mega Elektri d.o.o. is reported only in the media <http://slobodanvaskovic.blogspot.com/2013/04/kako-se-kalio-dragan-jezinic-nezavisno.html> and it is not clear whether it was used for all the company's plants or only some of them. It is assumed it was used for all three of the plants which have been completed.

<sup>86</sup> <http://www.eft-group.net/themes/front/assets/annualreport/2013-2014.pdf>, <http://koncesije-rs.org/dokumenti/2014/Izvestaj%20Komisije%20za%20Koncesije%20za%202014.god.pdf>

<sup>87</sup> Dongfang <https://www.glassrpske.com/drustvo/biznis/Kinezi-zele-da-grade-HE-Dabar/lat/237672.html>, China International Water and Electric Corporation (CWE) <https://www.energetskiportal.rs/kinezi-zainteresovani-za-izgradnju-he-dabar/>

catchment to the Trebišnjica, and Buk Bijela<sup>88</sup> on the River Drina, as well as the lesser-known Trn and Laktaši plants on the river Vrbas near Banja Luka.<sup>89</sup>

Bosnia-Herzegovina has faced opposition to its hydropower plans for many years now, and campaigners have succeeded in preventing or delaying several plants going ahead in valuable areas such as the Sutjeska National Park, on the Neretva, in the Ljuta canyon and on the Vrbas. As in Montenegro, resistance appears to have increased during the period since 2015. Although the most visible struggle is going on at Kruščica near Vitez,<sup>90</sup> other campaigns are going on across the country, from the Upper Neretva to the Vrbas, and campaigners have united in a Coalition to Protect the Rivers of Bosnia-Herzegovina.<sup>91</sup> As Bosnia-Herzegovina works on its new energy strategy, it would be well-advised to take account of this increased public sensitivity regarding hydropower, and to work on increasing energy savings, appropriately-sited wind plants and solar power instead.

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<sup>88</sup> Dongfang <http://www.capital.ba/nezakonit-sporazum-sa-kinezima-o-izgradnji-he-buk-bijela/>, China National Aero-Technology International Engineering Corporation, <https://www.oslobodjenje.ba/vijesti/ekonomija-i-finansije/kinezi-grade-he-buk-bijela>

<sup>89</sup> <https://ba.ekapija.com/news/981385/kinezi-zainteresovani-za-izgradnju-hidroelektrana-na-vrbasu-u-laktasima>

<sup>90</sup> <http://czzs.org/kruscica-bosnia-herzegovina-riot-police-forcibly-remove-residents-defending-river-against-hydropower/?lang=en>

<sup>91</sup> <http://rijekebih.org/>

### 3.3. Bulgaria

Our data for Bulgaria has been significantly improved, with 401 greenfield projects built or planned since 2005, 209 of them in protected areas.

At least 135 projects have started operation since 2005, most of which are below 10 MW, with only two exceptions. Most of the remaining projects (235) are however potential rather than actively planned, with no significant chance that they will proceed.

Bulgaria has not been awarding concessions<sup>92</sup> so the date used to indicate a project's entry into the legal system was the date of the obtaining the water permit. There has been a significant drop in awarding water permits after 2013, while the peak was in 2009 when 45 permits were awarded.

Bulgaria had a steady rate of adding approximately 10 plants per year to its operational fleet from 2005 until 2015, with a peak of 18 plants added in 2012, however in the last few years the trend has been downwards.

This is likely to have been motivated by the end of feed-in tariffs. In March 2015 amendments to the Renewable Energy Act and Energy Act in Bulgaria entered into force with immediate effect limiting the feed-in tariff scheme and stopping new support for hydropower, wind and larger solar plants.<sup>93</sup> Now only very small photovoltaic and biomass plants are eligible for support,<sup>94</sup> due to the rising costs of the support scheme. The changes have greatly dampened investor enthusiasm for constructing new plants for wind, solar and to some extent hydropower.<sup>95</sup>

Of the plants for which we managed to track financing, the EBRD was the largest financier of all the MDBs, with 18 plants financed and four more initially approved but then cancelled (part of the Vez Svoghe cascade project). This financing was through direct investments but also through the EBRD's instruments such as the Bulgarian Energy Efficiency and Renewable Energy Credit Line (BEERCL) or the Kozloduy Decommissioning fund. The EIB was identified as financier only in one instance.

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<sup>92</sup> Recently, Balkanka association has raised the issue of most of the plants in Bulgaria being built on the public land which until 2010 required a tender for concession organised, and which was never done. Since 2010 it still needs a building lease authorised by the Council of Ministers. According to the FOI responses sent to Balkanka, only three plants have a building lease, raising serious suspicions of a large-scale legal issue with most of the hydropower plants built. The issue is currently being investigated by DG Competition and has also been communicated to DG Environment, the EIB and the EBRD.

<sup>93</sup> <https://www.iea.org/policiesandmeasures/pams/bulgaria/name-25061-en.php>,

<sup>94</sup> <http://www.res-legal.eu/search-by-country/bulgaria/single/s/res-e/t/promotion/aid/feed-in-tariff-8/lastp/111/>

<sup>95</sup> <https://www.balcanicaucaso.org/eng/Areas/Bulgaria/Green-energy-in-Bulgaria-an-uneasy-success-158848>

Commercial banks have been active in supporting projects, both in the construction phase and in re-financing. We focused on the banks where we could reasonably assume that the loan was used for financing the construction. At least 48 projects received loans from commercial banks, with United Bulgarian Bank - UBB (11 plants) leading, followed by CIBank JSC and Unicredit Bulbank (7 plants each). UBB and CIBank are now part of KBC group, based in Belgium. Unicredit Bulbank is part of the Italian Unicredit Group that is also active in other countries of the region.

The development of hydropower plants in Bulgaria has been connected to numerous environmental problems.<sup>96</sup> This is partially due to a large number of plants being placed in ecologically sensitive areas including Natura 2000: 209 projects built since 2005 or still planned are in protected areas. We have established the financing scheme for 29 of those projects while for 126 we believe that there is no financing yet. Eight MDB-financed projects are in protected areas, while the rest are financed by commercial banks and other public sources.

Due to lack of financial incentives we expect that the construction of small plants will continue to slow down in Bulgaria. However, this does not diminish the threat from larger plants, with a recent push from the Bulgarian government to build the Yadenitsa dam.<sup>97</sup>

### 3.4. Croatia

Of 120 greenfield projects built since 2005 or still planned, no fewer than 100 are in protected areas. 10 of the greenfield projects have started operating, 4 are under construction,<sup>98</sup> and 32 are actively planned - 24 of them in protected areas. The remainder are regarded as 'potential', meaning that no-one appears to have been developing them during the last few years. Many of them are in protected areas and should have been cancelled long ago. They would face concerted opposition if they reared their heads again.

Some of the plants that have started operating in Croatia in recent years have proven controversial. The Ilovac plant in the river Kupa Natura 2000 area was financed by the EIB through the Croatian Bank for Reconstruction and Development and Zagrebačka Banka (Unicredit) as intermediaries. It was built in the river Kupa, known to be a habitat of the Danube Salmon (*Hucho hucho*), without its environmental assessment even examining the issue properly. The environmental assessment also failed to pick

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<sup>96</sup> Balkanka association is maintaining a database of HPPs and associated environmental issues <http://dams.reki.bg/Dams/About>

<sup>97</sup> For more details please see [https://dams.reki.bg/uploads/Docs/Files/EU\\_COMPLAINT\\_ANNEX\\_5\\_DRAFT2.pdf](https://dams.reki.bg/uploads/Docs/Files/EU_COMPLAINT_ANNEX_5_DRAFT2.pdf)

<sup>98</sup> Of these, Curak 1 and 2 in the Gorski Kotar region are in Natura 2000.

up scientific research that was going on which identified a new fish species - *Alburnus sava*, the Balkan shemaya - living near the dam site.<sup>99</sup>

The Dabrova Dolina plant in the Mrežnica Natura 2000 area was also financed through a financial intermediary of an international financial institution - this time the EBRD through Privredna Banka Zagreb (Intesa Sanpaolo). The project may have originally seemed harmless as it was presented as a mill conversion, but the construction did not follow the original plans and instead destroyed part of a tufa barrier. Changes in the water intake design have led to the Sušnjak tufa waterfall drying out completely during summer. The case is a stark warning about what can happen in situations where monitoring and enforcement by state institutions is lacking.

Although hydropower development is generally slowing in Croatia compared to the situation a few years ago, those projects which are active are among the most controversial. In 2017 state-owned electricity company HEP held public consultations on the the Kosinj/Senj II plant in the Lika region, which would require significant resettlement, and at the end of the year the long-dead Molve 1 and 2 projects on the protected river Drava were resurrected again<sup>100</sup> and presented to officials from Koprivnica-Križevci County.<sup>101</sup>

None of the planned and potential projects appear to have financing yet. Since 2015 the EBRD has confirmed to Bankwatch that it is not considering financing for the Zagreb na Savi complex and it was confirmed at the public hearing for Kosinj/Senj II that HEP will seek financing once it has obtained permits.<sup>102</sup>

### 3.5. Kosovo

In total 103 greenfield projects built since 2005 or still planned were identified in Kosovo. Almost half of these (51) are located in protected areas. In 2015 we identified just two new plants starting operation since 2005 and two more have been commissioned since then. However things seem to be speeding up: as many as 18 plants appear to be under construction.<sup>103</sup>

34 plants appear to be being actively planned - 18 of them in protected areas. Nearly all of the planned greenfield projects in Kosovo are under 10 MW but their average size is substantially larger than “small” hydropower plants in the rest of the former Yugoslav

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<sup>99</sup> <https://bankwatch.org/publication/broken-rivers-impacts-european-financed-small-hydropower-plants-pristine-balkan-landscapes>

<sup>100</sup> Previously planned as one plant, Novo Virje

<sup>101</sup> <https://drava.info/2017/12/koprivnicko-krizevacka-zupanija-podupire-izgradnju-hidroelektrana-molve-1-i-molve-2-na-dravi/>

<sup>102</sup> Hearing held on 3 November 2017

<sup>103</sup> We have less information from media reports and local people than in other countries in the region so this estimate is largely deduced from the energy regulator's decisions at <http://ero-ks.org/>



countries. Another feature of Kosovo is that the permitted capacities of the plants are constantly changing. Changes are common in the whole region but the extent seems to be larger in Kosovo as the changes are often as large as several megawatts, which raises questions about the quality of the project preparation and about the residual flow that will be left once the plants start operating.

There are also plans for large scale plants, mainly the 40 MW Rugova plant developed by Kelkos, a subsidiary of Austria's Kelag, part of the Peja cascade which threatens the Bjeshket e Nemuna National Park.

The largest plants planned - Zhur 1 and 2, totalling about 300 MW - are controversial due to the scale of physical and economic resettlement involved and transboundary issues, and are not moving forward. We therefore regard them as "potential".

The majority of the concessions are concentrated among a few companies:

- KelKos Energy Sh.p.k. (owned by Austrian Kelag) (8 greenfield concessions identified),
- Matkos Group Shpk (8 greenfield concessions identified),
- Eurokos (6 greenfield concessions identified)

Others such as Triangle General Contractors Inc, Hydro-Line and Edelweiss have a smaller number of concessions.

We have not identified any commercial financing for the plants so far, but this is more likely due to lack of transparency than because of a lack of financing.

The presence of multilateral financiers has so far been restricted to support for rehabilitation projects and advisory services. This is for the best: although Kosovo needs to break its dependence on lignite, it is crucial that financiers do not fall into the trap of thinking that anything which is not lignite is acceptable.

Kosovo is a relatively water-constrained country and its environmental protection regime is very underdeveloped. Being situated in a protected area does not seem to have been a barrier to obtaining permits for projects like the Restelica cascade currently under construction in the Mali Sharr National Park or the Peja cascade mentioned above.

### 3.6. Macedonia

We have identified 167 greenfield plants in Macedonia built since 2005 or still planned. Of these, 67 are in protected areas. 83 plants are still actively planned, 26 of them in protected areas.

At least 64 plants have gone online since 2005, and the hydropower boom is very much ongoing. In 2015 and 2016, 24 and 25 concessions were awarded respectively.<sup>104</sup> The peak of greenfield plants coming online was in 2015 (24 plants) comparable only to another peak of 12 plants starting operation in 2013. Due to the large number of concessions awarded in 2015 and 2016 we can expect another peak in a year or two as well.

2017 was not as dynamic as the last few years in terms of awarding concessions, most probably due to the crisis of the long-ruling Gruevski government that awarded most of the concessions for hydropower so far. Although the new government of Mr Zaev is in general assessed as more democratically oriented, there are no signs that the government will change its policy towards hydropower development.<sup>105</sup>



*The intake of the Brajcinska reka 1 plant, financed by the EBRD and owned by Feroinvest, is contributing to fragmentation of the habitat of the Prespa Trout. Photo: Igor Vejnović*

<sup>104</sup> [http://www.moepp.gov.mk/wp-content/uploads/2016/02/Skluceni-dogovori-za-dodeluvanje-koncesija-za-proizvodstvo-na-struja-i-izgradba-na-MHE\\_2015\\_2016.pdf](http://www.moepp.gov.mk/wp-content/uploads/2016/02/Skluceni-dogovori-za-dodeluvanje-koncesija-za-proizvodstvo-na-struja-i-izgradba-na-MHE_2015_2016.pdf)

<sup>105</sup> For instance, at its session no. 47 on 4 January 2017, the government was discussing continuation of several hydropower projects including making direct financial deals with banks. <http://vlada.mk/http%3A//vlada.mk/sednica/47>

This comes even after a warning from the Bern Convention Standing Committee for the government to cancel the projects in Mavrovo National Park.<sup>106</sup>

Notably, Vice-Prime Minister Kocho Angjusev is the owner of Feroinvest, one of the leaders in hydropower development and a beneficiary of EBRD loans.

As well as the previous leaders by number of concessions and operating greenfield plants - Feroinvest (19 plants owned directly or by its subsidiaries)<sup>107</sup> and EMK DOOEL Mali hidroelektrani Skopje, owned by Austrian investor Energy Eastern Europe Hydro Power GmbH (8 plants in Macedonia) - new players have emerged. A consortium of DJS Aktuel Gjoko dooel and JES Global dooel that have formed a new project company, Aktuel Enerdzi Grup, has been awarded six concessions with two planned in protected areas - one of which is Ribnicka, in Mavrovo National Park. DJS Aktuel dooel, one of the parent companies, has already invested in the Tresonecka hydropower plant in Mavrovo National Park, which has been shown to negatively affect the Tresonecka river. Of foreign investors, Austrian (19 plants including refurbished ones) and Italian companies (12 plants) are still leading.

What is characteristic for Macedonia is that it still features the largest number of greenfield plants financed by the EBRD in the Western Balkans (20 plants, 15 directly and five through intermediaries). Loans for five plants have been cancelled compared to our 2015 report but three added to the fleet thanks to EBRD partly revealing its intermediated financing<sup>108</sup> in the country. 17 of the EBRD-financed plants are in areas with various regimes of current or planned protection or internationally recognised areas of high biodiversity value. The EIB is next, with four concretely identified plants financed via financial intermediaries<sup>109</sup> (channelled via the Macedonian Bank for Development Promotion), three of them in protected areas.

Commercial banks are also active in extending loans to companies but due to low transparency of business records we haven't been able to pin down the financing to specific plants.<sup>110</sup> Similarly as in the other countries, feed-in tariffs are the main motivation for the small hydropower developers.<sup>111</sup>

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<sup>106</sup> <http://balkanrivers.net/en/news/bern-convention-macedonian-government-urged-halt-construction-hydropower-plants-national-park>

<sup>107</sup> [http://www.feroinvest.com.mk/businesses\\_mhe.html](http://www.feroinvest.com.mk/businesses_mhe.html)

<sup>108</sup> [http://www.webseff.com/index.php?option=com\\_content&view=article&id=329:hydropower-map&catid=7&lang=en&Itemid=331](http://www.webseff.com/index.php?option=com_content&view=article&id=329:hydropower-map&catid=7&lang=en&Itemid=331)

<sup>109</sup> Correspondence with the EIB as well as independent research.

<sup>110</sup> EUR 15 million going to BNB energy, Feroinvest, DJS Aktuel, Minka Energotek and NORD ENERGI GROUP was identified, with Ohridska Banka (Societe Generale) as the only bank involved that was identified with certainty.

<sup>111</sup> <http://www.res-legal.eu/search-by-country/macedonia/>



Additional to our 2015 report's information about financing of plants in protected areas, in 2017 we visited directly some of the plants already operating and financed by the EBRD and EIB.<sup>112</sup> We demonstrated that financing small hydropower plants in protected areas is having direct impacts, and recommended urgent restoration and mitigation measures.

*Dry river bed below the EIB-financed Tearce 97 intake in Macedonia. Photo: Andrey Ralev*



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<sup>112</sup> <https://bankwatch.org/publication/broken-rivers-impacts-european-financed-small-hydropower-plants-pristine-balkan-landscapes>





### 3.7. Montenegro

*Montenegro's stunning Lake Skadar faces numerous threats including a series of hydropower plants upstream on the Morača river. Photo: Pippa Gallop*

Of a total of 138 greenfield projects built since 2005 or still planned in Montenegro, 57 are in protected areas. Construction of small hydropower plants started relatively late in Montenegro compared to its neighbours but since 2013 at least 10 plants have started operating. 10 are under construction, 55 are actively planned - 17 of them in protected areas - and the remainder are “potential” rather than active projects.

Most of these “potential” plants are old, larger projects in protected areas (for example on the UNESCO-protected River Tara). 25 of them are more than 10 MW while 13 are smaller. These larger projects do not feature in the country's 2014 Energy Strategy, yet they are sometimes mentioned by their proponents and need to be monitored.

41 of the actively planned plants are smaller than 10 MW and 5 are larger. This is a large number of actively planned plants for a relatively small geographical area.

For the planned and potential plants, we estimate that at least 94 of them have no financing secured yet.

Project sponsors were identified for 74 out of 138 greenfield projects, largely in line with the number of dormant projects. Strategic partners for larger projects such as the Morača canyon cascade and Komarnica have not been found yet, and indeed a tender for Morača already failed once in 2011. However there is interest in the Morača project from China's Norinco, Power China and State Development and Investment Corporation (SDIC) as well as Turkey's Bereket Enerji.<sup>113</sup> If any of these companies are chosen they would likely be able to access financing from banks in their home countries.

For smaller projects, as we outlined in our previous report, most of the project companies are locally owned and some of them have been closely associated with the ruling party, for example Hidroenergija Montenegro d.o.o.<sup>114</sup> and BB Hidro d.o.o.<sup>115</sup>

It is therefore not surprising that Prva Banka is the most prolific commercial financier identified for hydropower plants in Montenegro, with 5 plants, all belonging to Hidroenergija Montenegro.<sup>116</sup> Prva Banka's largest shareholder is the former Prime Minister's brother, Aco Đukanović,<sup>117</sup> and it has long been at the centre of various scandals.<sup>118</sup> The state development fund, the Investment Development Fund of Montenegro (IRF), has also financed Hidroenergija's concessions with a EUR 5 million loan<sup>119</sup> and has financed three more plants in addition.<sup>120</sup>

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<sup>113</sup> <https://balkangreenenergynews.com/two-chinese-companies-show-interest-in-moraca-hpps-construction/>

<sup>114</sup> <http://www.vijesti.me/ekonomija/bemaks-i-obradovic-bi-jos-malih-hidroelektrana-167947>;  
<http://www.dan.co.me/?nivo=3&rubrika=Ekonomija&datum=2015-02-10&clanak=475567>; <http://www.crps.me> ;  
[http://www.monitor.co.me/index.php?option%3Dcom\\_content%26view%3Darticle%26id%3D4906:kako-je-bemaks-preuzeo-hidroenergiju-montenegro-visoki-napon%26catid%3D3368:broj-1210-11%26Itemid%3D4628](http://www.monitor.co.me/index.php?option%3Dcom_content%26view%3Darticle%26id%3D4906:kako-je-bemaks-preuzeo-hidroenergiju-montenegro-visoki-napon%26catid%3D3368:broj-1210-11%26Itemid%3D4628),  
<http://mans.co.me/anevsite/kreditni-podsticaj-za-premierovu-rodbinu-kumove-i-prijatelje/>  
<http://www.pretraga.crps.me:8083/>

<sup>115</sup> <http://www.pretraga.crps.me:8083/>

<sup>116</sup> Montenegro pledge register: <http://www.rzcg.gov.me/Podaci.asp?MR=R%2D1603300031>

<sup>117</sup> <http://www.scmn.me/emitenti.php?eid=238&sadrzaj=96>

<sup>118</sup> <https://www.reportingproject.net/firstbank/en/>, <https://www.cin.ba/en/dukanoviceva-porodicna-banka-opsluzivala-sarica/>, <http://www.balkaninsight.com/en/article/leaked-information-about-montenegro-s-bank-prompt-reactions>

<sup>119</sup> It is unclear which plants exactly are covered. In the database we included all those which are under the Bistrica, Šekularska and Kaludarska concessions and are completed or under construction, which totals 10 plants, as this document appears to suggest that the loan was used for all three:

<http://www.mek.gov.me/ResourceManager/FileDownload.aspx?rId=212707&rType=2>

<sup>120</sup> Bradavac, Paljevinska and Šeremetski potok.

<http://www.irfcg.me/images/documents/DokumentaDesniMeni/Korisnici%20IRF-a%20-%202013.godina.pdf>



International financial institutions have mainly been involved in project preparation so far, however in the last couple of years the EBRD and EIB have financed one project each.

The EIB does not reveal the names of projects financed through financial intermediaries but as the loan was made via the IRF in 2017 for a plant of around 0.8 MW<sup>121</sup> we can deduce that it is likely to be Nord Energy's Šeretmetski potok project.

The EBRD-financed project is one of the several Bistrica projects in Montenegro, near Bijelo Polje near or on the Ljuboviđe tributary.<sup>122</sup> The project promoter is Hydro Bistrica d.o.o., 97% owned by Synergy d.o.o.<sup>123</sup>

Synergy d.o.o. is majority-owned by Tomas Hajek, Director of Vodni zdroje AS, Prague, with minority participation of others including KIA Montenegro (the car company),<sup>124</sup> run by ex-Premier Djukanović's 'kum' (godfather/best man) Vuk Rajković.<sup>125,126</sup>

The other three percent of Hydro Bistrica d.o.o. is owned by Vodni zdroje AS, Prague (1%), Triangle General Contractors, Decani (1%), and Gradnja d.o.o. Bijelo polje (1%).<sup>127</sup>

Triangle General Contractors is the same one encountered in Kosovo projects such as Mal and Jasiq, and is owned by Florin Krasniqi, former parliament deputy for the Vetevendosje movement.<sup>128</sup>

It is quite surprising that the EBRD chose to support this project, given the involvement of politically exposed persons.

The number of projects has not changed dramatically in Montenegro since 2015 however there are some important new developments: The first is that grassroots resistance against small hydropower projects is increasing. Grlja, Vinička, Murinjska

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<sup>121</sup> EIB response to freedom of information request 13 December 2017

<sup>122</sup> EBRD response to freedom of information request 20 October 2017

<sup>123</sup> <http://www.pretraga.crps.me:8083/Home/PrikaziSlog/1>

<sup>124</sup> <http://www.pretraga.crps.me:8083/Home/PrikaziSlog/1>

<sup>125</sup> <http://www.pretraga.crps.me:8083/Home/PrikaziSlog/1>

<sup>126</sup> <http://www.vijesti.me/vijesti/vi-ste-milovi-placenic-i-posm-se-na-ovu-drzavu-937811>, [http://www.monitor.co.me/index.php?option=com\\_content&view=article&id=4941:svi-premijerovi-kumovi-gosodar-prstenova&Itemid=4650](http://www.monitor.co.me/index.php?option=com_content&view=article&id=4941:svi-premijerovi-kumovi-gosodar-prstenova&Itemid=4650), <https://crna.gora.me/vijesti/ekonomija/i-rodak-i-kum-dobili-koncesije/>

<sup>127</sup> <http://www.pretraga.crps.me:8083/Home/PrikaziSlog/1>

<sup>128</sup> <http://pretraga.crps.me/Home/PrikaziSlog/1> ; <http://www.trianglegc.com> ; [http://www.bloomberg.com/apps/news?pid=newsarchive&sid=adR8hDObY\\_c4](http://www.bloomberg.com/apps/news?pid=newsarchive&sid=adR8hDObY_c4) ;

<http://www.booknoise.net/benotafraid/characters/> ;

[http://www.pbs.org/pov/thebrooklynconnection/film\\_description.php](http://www.pbs.org/pov/thebrooklynconnection/film_description.php) ;

<http://www.kuvendikosoves.org/?cid=2,102,758>

rijeka and Trepačka rijeka are among the projects which have been met with protests by local people in recent years.<sup>129</sup> In 2016 Energie Zotter Bau GmbH & Co KG from Austria agreed to have its concession annulled due to local opposition to the Grlje project.<sup>130</sup>

Possibly partly as a result of this increased opposition, but officially because Montenegro has achieved its renewable energy target for 2020, the Government has decided not to issue new energy permits for greenfield electricity generation in 2018, except for requests already submitted for solar.<sup>131</sup> This does not mean that the small hydro tsunami is over in Montenegro, but it provides at least a welcome pause to reflect on the country's energy future.

Indeed an update of Montenegro's energy strategy is planned this year - an opportunity which needs to be seized to take advantage of its energy savings and solar potential.

### 3.8. Serbia

We have identified 299 greenfield plants in Serbia built since 2005 or still planned. Of these, 62 are in protected areas. 192 plants are actively planned, 42 of them in protected areas.

Serbia is picking up the pace with constructing small hydropower plants. At least 65 greenfield plants with capacity larger than 100 kW have started operating since 2005. Most of these have been within the last few years: 12 went into operation in 2014, 11 in 2015, 7 in 2016 and 15 in 2017. All of those tracked are below 10 MW and many are below 1 MW.

The fact that most of the projects are small is reflected in the structure of financing as well of the investors: most of the financing identified came from commercial banks and most of the investors are domestic. Out of 55 projects where we found financing, 47 were funded by commercial bank loans.

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<sup>129</sup> <http://www.dan.co.me/?nivo=3&rubrika=Regioni&clanak=619582&datum=2017-10-19&najdatum=2017-10-19>, [http://monitor.co.me/index.php?option=com\\_content&view=article&id=7371:mjetani-andrijevakih-sela-protiv-hidroelektrana-u-korist-nae-tete&catid=5156:broj-1369&Itemid=6528](http://monitor.co.me/index.php?option=com_content&view=article&id=7371:mjetani-andrijevakih-sela-protiv-hidroelektrana-u-korist-nae-tete&catid=5156:broj-1369&Itemid=6528), [http://www.monitor.co.me/index.php?option=com\\_content&view=article&id=7693:andrijevic-pobune-zbog-malih-hidroelektrana-kad-tajkuni-grade-&catid=5416:broj-1390&Itemid=6801](http://www.monitor.co.me/index.php?option=com_content&view=article&id=7693:andrijevic-pobune-zbog-malih-hidroelektrana-kad-tajkuni-grade-&catid=5416:broj-1390&Itemid=6801), <http://www.mek.gov.me/ResourceManager/FileDownload.aspx?rId=232244&rType=2>, <http://www.rtcg.me/vijesti/drustvo/169894/murinjani-protiv-gradnje-malih-he.html>

<sup>130</sup> <http://www.gov.me/ResourceManager/FileDownload.aspx?rId=232180&rType=2>

<sup>131</sup> Government of Montenegro: Plan izdavanja energetske dozvola za 2018. godinu, [http://www.gov.me/sjednice\\_vlade\\_2016/56](http://www.gov.me/sjednice_vlade_2016/56), item 23

The investors' rush is mostly motivated by the attractive feed-in-tariffs, which unlike wind and solar do not have capped maximum capacities available for state subsidies.<sup>132</sup>

The government has been also trying to induce stronger uptake by organising two calls for concessions and creating a new cadastre of hydropower plants and potential locations.<sup>133</sup> So far the locations offered were to a significant extent based on the old 1987 cadastre, that is outdated in terms of hydrological data and didn't take into account nature protection.

Twelve projects with financing identified are in protected areas. The Stara Planina Nature Park (on the border with Bulgaria) and Kopaonik National Park (in particular area that borders that park, around Josanicka banja), both future Natura 2000 zones, are under most pressure. The Golija Nature Park and nearby Goc-Gvozdac have also been targeted. Outside of the protected areas, the west of Serbia, including the area around Prijepolje and Priboj and south on the axis Crna Trava-Trgoviste feature a large number of built and planned plants.



*The Vladići 1 plant financed by Erste leaves hardly any water below its intake even in February, let alone summer. Photo: Igor Vejnović*

<sup>132</sup> <http://www.res-legal.eu/search-by-country/serbia/single/s/res-e/t/promotion/aid/feed-in-tariff-15/lastp/478/>

<sup>133</sup> <http://www.eptisasee.com/serbia-cadastre-for-small-hydro-power-plants/>

The top two commercial bank financiers are Erste Bank (26 projects) and Unicredit (10). Erste has been involved in the Porecje and Laniste cascade that provoked protest by the locals. Even the environmental impact assessment for the latter project noted the damage already done by the former. Unicredit Bank is financing the Zvonce project, currently being built, that has also been causing protests by local people.

Of the international banks, the EBRD is the most active, first and foremost in rehabilitation projects<sup>134</sup> as well in the aforementioned projects around Josanicka banja.<sup>135</sup> However the EIB is leading in terms of intermediated loans, accounting altogether for 12 projects.<sup>136</sup> We suspect that some of the projects that we found financed by commercial banks loans are in fact intermediated EIB loans, but we were not able to confirm that with the bank as it refuses to provide full data. At the same time, the commercial banks themselves are also keen to hide data about their investments.

Most of the investments are by Serbian investors, with a few channelled via tax havens such as Singapore or Cyprus. A small number of projects are financed by the Serbian 'guest workers' that decided to invest, usually in their home regions. Some investors are controversial with alleged connections to the criminal milieu (Gradiste plant and Serbian criminal Ljubisa Buha Cume)<sup>137</sup> or are alleged to be involved in illegal surveillance (Doo National Electric Company).<sup>138</sup> Money laundering is also suspected in the case of VMHE ENERGY company, that owns or promotes several plants.<sup>139</sup>

Of the Serbian investors, the leading position belongs to the investors gathered around Eco Energo Group that has eight directly-owned projects while two more are promoted via Mini Hydro Investments company (Rekovici and Vidnjiste). Both project companies are owned by Roaming Electronics, a company that has close connections to both the previous and the current regime in Serbia.<sup>140</sup> Also, Nikola Petrovic, the 2012-2016 director of Elektromreža Srbije (the Serbian national transmission system operator) was one of the owners of Eco Energo Group before his mandate started, and once his mandate had terminated he returned to his executive position and ownership role in

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<sup>134</sup>

<http://www.ebrd.com/cs/Satellite?c=Content&cid=1395256288426&d=Mobile&pagename=EBRD%2FContent%2FContentLayout>

<http://www.ebrd.com/cs/Satellite?c=Content&cid=1395254845601&d=Mobile&pagename=EBRD%2FContent%2FContentLayout>

<sup>135</sup> The loans have been repaid since then.

<sup>136</sup> Correspondence with the EIB

<sup>137</sup> <http://www.capital.ba/ljubisa-buha-cume-preuzeo-rudnik-boksita-srebrenica/>

<sup>138</sup> <https://www.vranjske.co.rs/2013-05-23/tra%C5%BEi-se-gospodin-popovi%C4%87.html>

<sup>139</sup> <https://pistaljka.rs/home/read/679>

<sup>140</sup> <https://www.krik.rs/tag/nenad-kovac/>

the company.<sup>141</sup> The Rekovici project is strongly opposed by the local community in Priboj.

Of the international investors, Sistema Rinova Uno (Italy) with nine plants is the most prominent, although it seems that the projects are not moving forward.

Commercial banks are still cautious when investing in hydropower projects, often securing the loan with collateral such as shares in the special project company, or in the later project stages through adding power purchase contracts or machinery as a pledge. Once the project is online, the risk drops, and the bank, often the same one that provided the initial loan, offers refinancing, enabling the investor to lower the costs of financing.

Serbia has vague plans for big greenfield hydropower plants, the most probable big projects being developed in cooperation with Bosnia and Herzegovina, on the middle and lower stretches of the river Drina.<sup>142</sup> However even some rehabilitation and upgrade projects - Pirot and Zavojski tunnel<sup>143</sup> - as well as multi-functional ones (such as the Arilje-Svrackovo reservoir) have already proved environmentally problematic.<sup>144</sup>

However, if the current trend continues, most of the greenfield projects will be small and because of their geographical dispersion, this is already increasing the number of conflicts with local communities. A number of groups protecting rivers have become more visible in the last few years and this will hopefully dissuade investors and financiers from supporting more projects that endanger biodiversity or the water rights of the local communities. Public resistance has already prompted the Ministry of Environment to publicly announce a review of the permits for hydropower plants in the Stara Planina Nature Park. Also it pushed the Brus municipality to cancel multiple permits,<sup>145</sup> giving hope that people's representatives will finally tune in to the voice of the communities that are exposing risks to their livelihoods and nature.

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<sup>141</sup> [https://www.cins.rs/srpski/research\\_stories/article/male-hidroelektrane-drzava-i-firme-povezane-sa-vucicevim-kumom-najvise-profitiraju](https://www.cins.rs/srpski/research_stories/article/male-hidroelektrane-drzava-i-firme-povezane-sa-vucicevim-kumom-najvise-profitiraju)

<sup>142</sup> <https://balkangreenenergynews.com/serbian-energy-minister-calls-for-untangling-drina-hydropower-deal-with-italy/>

<sup>143</sup> <http://www.masina.rs/eng/private-hydropower-plants-destroying-natural-resources/>

<sup>144</sup> <https://www.youtube.com/watch?v=31h3P5vs7aw>

<sup>145</sup> <http://www.brusonline.com/politika/4515-opstina-brus-donela-resenje-o-ponistenju-lokacija-za-izgradnju-4-male-hidroelektrane>

### 3.9. Slovenia

We identified 43 greenfield projects built or planned since 2005, out of which eight are operating, 29 are actively planned and the remainder are potential projects, not being actively pursued. 29 greenfield projects are in protected areas and 22 of these are actively planned.

Overall Slovenia seems to be concentrating on a smaller number of larger plants. The majority of planned projects are promoted by the state-owned Holding Slovenske Elektranne (HSE) d.o.o. and its subsidiaries Hidroelektranne na Spodnji Savi (HE-SS), Soške Elektranne Nova Gorica (SENG) d.o.o and Dravske Elektranne Maribor (DEM).

HSE is promoting large-scale hydropower plants on the middle and lower Sava. Four out of five planned plants on the lower Sava are now in operation as the Brežice project started test operations in 2017.<sup>146</sup> The remaining plant, Mokrice, is currently in the planning stage. Ten greenfield plants of 15-68 MW are planned for the Middle Sava but are currently progressing very slowly and are expected to be completed only by 2030.<sup>147</sup>

Unlike in the other countries, the EIB is the most active MDB in the hydropower sector in Slovenia, having financed the 39 MW Krsko, 42 MW Blanca and 41 MW Brezice plants on the lower Sava as well as the Avče plant on the Soča.<sup>148,149</sup> The EIB has also financed reconstruction of plants via financial intermediaries, Unicredit Slovenia and the Slovene export credit agency.

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<sup>146</sup> <http://www.he-ss.si/eng/he-brezice-milestones.html>

<sup>147</sup> <http://www.hse.si/si/projekti/hidro/gradnja-he-na-srednji-savi>

<sup>148</sup> <http://www.eib.org/infocentre/press/releases/all/2006/2006-015-slovenia-eur-43-million-for-rational-use-of-energy.htm>, <http://www.eib.org/projects/pipelines/pipeline/20130148>

<sup>149</sup> Several commercial banks including Bank Austria Creditanstalt (Unicredit) also participated in financing Avče. <http://www.poslovni.hr/trzista/slovenija-eib-financira-he-avce-6095>



## 4. Conclusions and recommendations

We see six main takeaways as a result of this update:

(1) There is a difference in speeds that the countries are taking toward developing hydropower capacities: for small hydropower plants there is a slowdown in Croatia, Bulgaria, Montenegro and Slovenia while there is a speed up in Serbia, Kosovo and Albania and a steadily high rate in Macedonia and Bosnia-Herzegovina. Also Albania and Kosovo seem to be featuring larger “small” plants in general. Most of the countries are attempting to construct larger plants, but only Albania and Slovenia have succeeded in recent years. There is still an urgent need for action to prevent harm from hydropower development in all countries, including through tightening standards for financing.

(2) The financial structures are similar in all the countries, with the project financing through debt being the main method identified. The biggest chunk of the cake in terms of sheer number of projects financed goes to commercial banks, led by Erste and Unicredit. The Multilateral Development Banks (MDBs) are still led by the EBRD in terms of number of projects and EIB in terms of financing volume. They have cracked open the market by pumping up the financial sector with intermediated loans. MDBs as public institutions need to take a lead but also to be closely followed by commercial banks in raising environmental and social standards.

(3) However other elements of the equation are needed to make up the whole picture - government subsidies in the form of feed-in tariffs being the most important, as well as financing from companies’ own resources/resources of the mother company. In Bulgaria we have seen that without feed-in tariffs for hydropower, development soon slows down.

(4) The current system of protected areas is not dissuading investors or financiers. Implementation of the Natura 2000 network and the Water Framework Directive across the region needs to be speeded up but will not happen soon enough to prevent the majority of the damage from being done. There is also a need for strong and forward-looking political decisions rather than waiting for the market or EU accession to take care of the problems. The decision by the Albanian government to establish National Parks as no-go zones can be seen as a first step towards that end, that needs to be properly implemented, internationalized and widened.

(5) There is a need for overall greater transparency of the sector. We have seen that lucrative hydropower contracts can create a toxic mix of corrupt politics and even attract people from the criminal milieu. The weak governance in all countries with the extreme cases of Albania and Kosovo requires all actors to establish greater

transparency of financial transactions, both in the public interest and the interest of the financial actors themselves.

6) Hydropower is going to keep generating resistance from local communities and environmental groups in the region until these issues are resolved. It is also becoming less and less of a dependable energy source due to fluctuations in hydrological conditions. Ultimately governments need to re-orientate their energy policies to reduce their dependence on hydropower and lignite, and to make use of their countries' great potential for energy savings, solar and appropriately-sited wind power. The EU and MDBs have a crucial role to play in helping to make this happen.

## **Recommendations**

### **Multilateral development banks need to**

- Adopt and/or better implement hydropower sustainability criteria and establish clear no-go zones in protected areas and rivers of outstanding quality.
- Publish project information about hydropower projects (and others with a clear environmental impact) which are financed through financial intermediaries.
- Require good quality environmental impact assessments for all hydropower projects including those financed through financial intermediaries and irrespective of the size of the plants.
- Pay increased attention to the issue of corruption and politically exposed persons' involvement in hydropower plant projects and their benefitting from feed-in tariffs.

### **Commercial banks need to**

- Embrace their role in stimulating local economic development by financing only those projects which have passed through strict environmental due diligence.
- Disclose planned and signed financing for infrastructure projects on the basis of public interest, and in the case of MDB intermediated loans, also because the money involved is public money.
- Understand that commercial banks' responsibility goes beyond financial services and that their financial decisions are affecting nature and local communities.
- Open up to affected communities and relevant civil society groups by proactively seeking to communicate with them during loan appraisal as well by establishing grievance mechanisms.
- Where not yet existing, establish sustainability criteria and standards to ensure responsible financing of renewable energy; if existing update them to include protected and valuable natural areas as no-go zones.

- Require good quality environmental impact assessments for all hydropower projects, irrespective of their size.
- Pay increased attention to the issue of corruption and politically exposed persons' involvement in hydropower plant projects and their benefitting from feed-in tariffs.

#### **The governments of the countries in the region need to**

- Diversify their energy policies to make greater use of energy savings, solar and appropriately-sited wind potential.
- Adopt system scale planning on the river basin or regional level for decision-making on hydropower. Shift away from planning led by projects to planning led by needs.
- Establish clear no-go zones in protected areas and rivers of outstanding quality.
- Where not done already, transpose and implement the Birds and Habitats Directives and Water Framework Directive.
- Require good quality environmental impact assessments for all hydropower projects, irrespective of their size.
- Publish up-to-date project information about hydropower plants in a central registry.

#### **The European Commission needs to**

- Prioritise energy efficiency and diversification of renewable energy sources in its work in the region.
- Provide increased assistance to countries in transposing and implementing the Birds and Habitats Directives and Water Framework Directive and in researching baseline biodiversity, hydrology and water quality in the countries.
- Use its influence in the international financial institutions to ensure that they do not support environmentally harmful hydropower projects.
- Refrain from endorsing any greenfield hydropower projects as priority investment projects until the biodiversity, water quality and hydrology baseline data in the region is significantly improved.
- Support the countries to develop no-go zones.
- Continue to pay attention to the issue of inappropriate hydropower development (both in terms of environment and corruption) during its assessments of accession countries' progress towards the EU.
- Ensure that EU state aid rules designed to encourage renewable energy do not allow subsidies for hydropower in sensitive areas.

#### **The European Commission and Energy Community need to**

- Pay increased attention to the quality of Strategic Environmental Assessments and Environmental Impact Assessments and public consultation processes in relation to hydropower projects.
- Ensure that the implementation of EU state aid rules regarding the energy sector is speeded up to avoid undue subsidies for hydropower in sensitive areas.
- Consider how elements of the Birds and Habitats Directives and Water Framework Directive could be adapted to the Energy Community Treaty to reduce the negative impact of hydropower projects.

### **Recommendations for NGOs**

- Participate in the upcoming EBRD and EIB policy revision processes to ensure that the banks disclose all hydropower financing including through financial intermediaries and improve their sustainability criteria including no-go zones.
- Work to ensure that subsidy regimes in the countries open up to solar energy and stop incentivising uncontrolled hydropower development.
- Take co-ordinated action to approach commercial banks and ask them to disclose project information and adopt sustainability criteria including no-go zones.
- Continue working together to refine and update the database created for this project.

## 5. Annex

### 5.1. Methodological notes

Our 2015 research was based on a database of 937 existing and planned hydropower plants and a study by the Fluvius consultancy on hydropower plants in protected areas.<sup>150</sup> For a detailed explanation of the methodology we used, please see Annex 1 of the Bankwatch study.<sup>151</sup>

We used the database to establish the starting set of projects to be researched. We then used the resources outlined below to expand and refine our own database of hydropower projects.

The original database contained numerous projects for which potential has been identified but which have not moved forward in the last few years. Given that our goal is to establish how hydropower projects are being financed, when adding new projects to the database we have concentrated mostly on projects which have been active in the last few years. This also means we have avoided adding plants without a name to the database as they are extremely difficult to identify and would be almost impossible to trace financing for. Numerous such plants occur in Slovenia, Bulgaria and Serbia. We also did not look into plants in Greece and Turkey. These differences in approach account for the majority of differences between the figures cited in this study and those cited by Fluvius.

For research purposes it is more practical to examine plants that have already been financed as plans regarding future financing change very quickly. However for watchdog organisations such as Bankwatch and our partners, it is also crucial to see what is planned in the near future. Therefore we use the concept of “greenfield projects”, meaning those that have started operating in or after 2005 or which are currently planned. This enables us to get a bigger sample of financing and therefore a better look at financing trends.

Locating hydropower plants in relation to protected areas turned out to be very tricky due to the lack of public information available. In general we followed the Fluvius study except where we had other credible sources. Some plants are right on the edge of protected areas or internationally recognised areas of high biodiversity value such as Important Plant Areas, Prime Butterfly Areas or Important Bird Areas. This raises the question of whether they should be included as being inside or impacting on the areas

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<sup>150</sup> Schwarz, U., 2015. Hydropower Projects in Protected Areas in the Balkan Region. RiverWatch & EuroNatur, <http://balkanrivers.net/sites/default/files/Protected%20areas%20and%20hydropower%20dams%20in%20the%20Balkan190515.pdf>

<sup>151</sup> <https://bankwatch.org/wp-content/uploads/2015/12/SEE-hydropower-financing.pdf>



or not. Either approach would be defensible. In most cases we decided to include them as “inside” the areas due to the fact that high biodiversity value areas in southeast Europe are under-protected and therefore any erosion of the boundaries of existing protected areas is a matter of concern. In addition, many valuable species and habitats are not protected at all, and therefore the figures on financing for hydropower in protected areas anyway under-emphasise the amount of damage being done to biodiversity. However in the case of an Important Plant Area in Macedonia we decided that damage to the target species by a very small hydropower plant on its lower edge was not likely to be serious and did not include it as “inside”.

For the the updated study, we checked as much of the database as possible within the time available, but particularly emphasised the following:

- Expanding the entries for Serbia, Bulgaria and Bosnia-Herzegovina.
- Updating the information on MDB financing obtained through communication with the banks since the 2015 study.
- Expanding the information on commercial bank financing.
- Expanding the database to distinguish between plants for which we are not able to establish financing and plants for which we believe no financing has been found yet. This is in order to better understand how big the knowledge gap is with regard to financing.
- Updating sources of information to the extent possible within the time available.

Regarding financing from the international financial institutions, we included planned, realised and cancelled financing in the database, as well as different types of support for projects such as advisory services/technical assistance, project financing and guarantees. In the statistics however we only include projects to which the banks have actually committed and explicitly exclude cancelled financing. Although technical assistance provides a crucial basis for projects, we decided this time not to include it in the headline statistics as it may give the impression that a bank is more active than it really is, for example if it provides technical assistance to develop a project with several plants in one cascade.

## 5.2. Information resource overview

The information sources used in the 2015 report are listed in the annex at the end of the report.<sup>152</sup> The major innovation in this update was the use of pledge registries or Secured Transactions Registries. We focused on the loans used for construction of the plants with an assumption that the loan was indeed used for this purpose if assets used as a collateral are shares in the SPV company or contracts for the machines ordered or other movable property that is connected with the project AND the loan was extended before operation started. Loans extended after the project went online are sometimes noted in the remarks in the database. We are assuming that some of those loans are used for refinancing and some for further investments.

We also submitted numerous new information requests, the responses to which are listed below:

### EBRD

- Western Balkans Sustainable Energy Direct Financing Facility (WeBSEDF) - a list of HPP projects supported by the WeBSEDF provided by e-mail upon request on 20 October 2017
- Western Balkans Sustainable Energy Financing Facility II (WeBSEFF II) - a map of projects 2015-2017 supported by the WeBSEFF II provided by e-mail upon request on 20 October 2017; the names of the financial intermediaries were not disclosed due to commercial confidentiality
- Western Balkans Sustainable Energy Financing Facility I (WeBSEFF I) - a list of projects supported by the WeBSEFF I provided by e-mail upon request on 6 February 2018

### EIB

- An aggregate data overview of EIB hydropower operations conducted through financial intermediaries in southeast Europe 2015-2017 provided by e-mail upon request on 13.12.2017. The names of HPPs were not disclosed due to commercial confidentiality
- A response from Green Growth Fund (GGF) on 2.11.2017 on Category A (and Category B where high E&S risks are identified) projects in its portfolio in Southeast Europe and Lengarica HPP in Albania.
- A response from National Bank of Serbia received on 17/10.2017 regarding the EIB Apex loan: investments not disclosed due to commercial confidentiality

### IFC

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<sup>152</sup> <https://bankwatch.org/wp-content/uploads/2015/12/SEE-hydropower-financing.pdf>

- Information provided by e-mail on 6.7.2017 regarding the investments in HPPs in Southeast Europe during 2015 – 2017; investments made by IFC's FI - UniCredit Bank Bosnia and Herzegovina - not disclosed due to commercial confidentiality
- Information provided by e-mail on 29 November 2017 regarding investment in EVN Macedonia
- Information provided by UniCredit Bank Bosnia and Herzegovina by email on 18.12.2017: investments not disclosed due to commercial confidentiality

#### **KfW banking group (KfW)**

- Overview of KfW hydropower operations in southeast Europe 2015-2017 provided by e-mail upon request on 23.10. 2015; the names of the plants were disclosed

#### **Commercial banks**

- Research on the financial intermediaries of the EIB (results published in January 2017)<sup>153</sup> and the EBRD (results published in May 2017)<sup>154</sup> - details of the information requests carried out are included in the research
- Sparkasse Bosnia has disclosed one HPP project financed;
- Other banks denied financing projects or denied disclosure based on commercial confidentiality

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<sup>153</sup> <https://bankwatch.org/sites/default/files/outsourcing-accountability.pdf>

<sup>154</sup> <https://bankwatch.org/wp-content/uploads/2017/05/briefing-EBRD-FinancialIntermediaries-05May2017.pdf>