

"Balkanka" Association, Sofia, Bulgaria "Nature has all the time in the world, we do not".

POSITION

SUBJECT: Environmental, Climate and Social Guideline on

Hydropower Development

PROMOTER: European Investment Bank /EIB/

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INTRODUCTION

As a nongovernmental organization watching closely the hydropower development and operation in Bulgaria, we, the members of Balkanka Association Sofia, welcome the Guideline on hydropower development of the EIB. On the other hand, since we have established to a great success the BG hydropower monitoring platform in 2014 - https://dams.reki.bg/Dams/About?setlang=en we have our huge experience to share.

Having the best knowledge of hydropower *sustainable* performance in our country, we feel the need to share our uncertainties and fear, since the Guideline in view has too many gaps and shortcomings which we will discuss in detail hereafter.

But at the very beginning we will mention only the most unacceptable fact of all the resettlement of local people for the sake of hydropower which, obviously, is acceptable to the EIB under certain conditions, in the 21st Century, even in the EU Member States, not that the exact location or membership of a country matters in this case. So here is a short story from our home experience:

In the middle of the 20th Century a new big dam was built for the Sofia city drinking water supply and for hydropower. The people living in three villages were forced to abandon their homes, chased away to resettle elsewhere in the country. The name of the new dam, set into operation in **1954**, was **Stalin!**

This story has come to our minds several times while reading **section 3.i.** of EIB's Guideline where resettlement of people is discussed so cold bloodedly, as if people are packed potatoes. Forced resettlement of people is absolutely unacceptable to normal minds because it contradicts the modern values of democracy in the 21st Century all over the world, including the EU, which is so proud of both its democratic values and its financial institutions like the EIB.

That is why we will point out to the EIB decision makers that we are not living in the middle ages now, neither do we live in Stalinist times. Since even the potatoes tend to get hot when someone tries to boil them, if the EIB will ever be involved in resettlement of local people against their will, the bank should also know that people will resist, no matter what is written in the bank's *Requirements of the Bank's Environmental and Social Standard 6: Involuntary Resettlement*.

Maybe the bank decision makers will be happy to resettle with their entire families, including their old parents and their kids for the sake of hydropower, but normal human beings will fight - that is the natural human behavior and instinct. Even under the governance of the repressive regimes the world is still full of, normal people are going to resist. Therefore the Guideline must include recommendations on the reasonable casualties that will appear to be acceptable to the bank and this is an important issue we have read nothing in the Guideline about.

Furthermore, the overall impression of the Guideline is that the document is written by the hydropower lobby which is not used to bear responsibility for what it does. Through the entire document a very simple scheme is constantly applied. It consists of the following steps:

- 1. A problem is identified and is always announced to be "potential", "may happen to occur" and stuff like that, never mind that the vast majority of problems caused by hydropower are inevitable and unavoidable like the deterioration of the river ecosystem ecological status for example.
- 2. Reasonable assessment of the problem is required by the bank, together with some mitigation measures, which need to be proposed, aiming not to avoid, but to mitigate the adverse impact to an extent, which is not specified.
- 3. Post construction monitoring should be also carried out and the results should be reported to the competent state authorities and in some cases to the bank.
- 4. Evaluation of results from monitoring is required, together with eventual adjustments in the performance, commonly referred to as *adaptive management*, aiming to improve the situation, again to an unknown extent.

Sounds nearly perfect, doesn't it? There is only one small detail though - the assessments are paid by the promoter, the monitoring is paid again by the promoter and they are both conducted by the same team of experts always! Thus the problems are always underrated, "mitigation" measures are only aiming to reduce the costs for the promoter and the monitoring always shows that everything is perfect. In this scheme everybody's happy - the bank decision makers most of all, with the small exception of the creatures living in or alongside the river. Monitoring always shows perfect status, otherwise it may turn out that the experts didn't know what they are doing at the beginning of the project and then disgruntled operators will not pay...

Moreover, judging from our experience in Macedonia, the EIB is obviously satisfied with the mere existence of some kind of a document called Assessment, regardless of its quality, no matter how poor it is.

In Macedonia all the hydropower investment plans hold a strange looking document proudly called "Environmental elaborate" and some have a strange sounding document more proudly called "Strategic Environmental Assessment /SEA/". None of these has anything to do with the requirements for the Environmental Impact Assessment /EIA/ and/or for the Appropriate Assessment /AA/ set in the relevant EU Directives -Directive 2011/92/EU /amended in 2014 by DIRECTIVE 2014/52/EU/, as well as DIRECTIVE 92/43/EEC. Then we have a strong message for the EIB - take any of the named documents for your investments in Macedonia and ask a real good EIA/AA expert from an EU member state to see if these documents are any good, because we know that you won't believe us that the quality is zero. But at least there is the simple fact that SEAs are not prepared for individual hydropower projects - dear friends, you haven't checked them, have you?

And even if a full independent monitoring is professionally carried out by independent experts with the highest level of biological expertise like for example the CEE Bankwatch Network **Broken Rivers Report** on hydropower in the Western Balkans in 2017, the results are undermined or rejected by the EIB team, pretending that they believe the promoter and themselves everything is fine, only to keep their conscience clear, in direct violation of the Guideline section *7. Monitoring requirements*. The CEE Bankwatch Network report can be found here:

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

And the EIB answer can be found here: https://dams.reki.bg/uploads/Docs/Files/EIB ANSWER.pdf

We will remind that the Lipkovo intake fish pass was deliberately blocked by the operator, that there was an artificial wooden fence to catch the leaves in the riverbed above the intake, thus fish migration was <u>deliberately</u> blocked all over the place. We will also remind that the lake was full of silt never mind that the promoter "ensures that cleaning of the material deposits... takes place regularly, once or twice per year" and that the hydro biological survey reported huge biological loss under the intake, and the EIB did nothing to reduce the damage! Moreover - the behavior of the bank clearly shows that they don't rely on any independent reports, but prefer to believe the operators, never mind that there were also pictures and videos used as proof in the above report. In this way it's obvious that the independent monitoring, carried out by independent NGOs only to waste their limited resources, is absolutely senseless and is not welcome by the bank at all. And yet another reason is that the bank cannot do anything to force dishonest operators to follow neither the law, nor the EIB's own regulations.

And worst of all - if and when a devastating impact has been caused to the river ecosystem or to the local people life and wellbeing alongside their dead river, there are no recommendations in the Guideline concerning what has to be done in order to reduce the

impact - like who will bear responsibility and who will pay to cover the expenses for the damage. That is why the bank will never come to admit that damage has been caused, no matter who reports it - media, interested local people, NGOs, or other.

For every section of the Guideline we will discuss all these and many other problems in detail. But about two weeks ago we have shared with the EIB a report of ours concerning the VEC Svoge devastating impact here in Bulgaria. It was financed by the EBRD by the way, not by EIB, but judging from the poor quality of the EIB's Guideline on hydropower, it could have been so easily and carelessly financed by the EIB just the same as well. That is why we strongly recommend that the VEC Svoge case is studied by the EIB decision makers, hoping that some lessons will be learned and some measures will be included in the Guideline in order to avoid such mishaps in the future.

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ACRONYMS

MOEW - Ministry Of Environment and Waters of Bulgaria
 Regional Inspectorate/s of Environment and Waters

RBD - River Basin Directorate/s

BDDR
 EARBD
 WARBD
 BDBSR
 Basin Directorate Danube Region
 East Aegean River Basin Directorate
 West Aegean River Basin Directorate
 Basin Directorate Black Sea Region

WA - Water Act

FA Act - Fishing and Aquaculture Act

SEA - Strategic Environmental AssessmentEIA - Environmental Impact Assessment

AA - Appropriate AssessmentRBMP - River Basin Management Plan

HPP - Hydropower Plant

I. IDENTITY AND CONTACT DETAILS

1. Name:

"Balkanka" Association, Sofia, Bulgaria

2. Sector / field of activity and location(s) where active:

"Balkanka" Association is a non-profit, non-governmental organization, registered in Bulgaria for action in public benefit, on 07 August 2013, company file 203/2013 of the Sofia City Court, UIC 176566443. The main objectives of "Balkanka" are protection and conservation of river biodiversity, with a focus on conservation and restoration of indigenous Balkan brown trout /salmo trutta/ populations in Bulgarian rivers.

3. ADDRESS OR REGISTERED OFFICE

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II. GENERAL NOTES

In the last four years Balkanka Association has set up /with the substantial help of *WWF-Bulgaria*/ an internet hydropower monitoring platform:

https://dams.reki.bg/Dams/About?setlang=en - where we upload and expose all information that refers to commissioning, design, construction and operation practice of HPP we manage to collect, including pictures and video clips.

In July 2017 the number of operating HPP in Bulgaria was exactly **258**. Out of these we have already checked **177** HPP sites - some of them on more than 10 /ten/occasions. The number of weirs checked exceeds the number of HPP by far, due to the fact that old cascades have numerous water catchments. For example - the Petrohan cascade operates with three HPP and more than 60 water catchments, about 20 of which we have shot, the Belmeken-Sestrimo cascade - with three HPP and more than 120 water catchments that we know of /55 of them - shot/... and so on.

At least 80% of the water catchments we have visited and checked are located within the boundaries of Natura 2000 Habitats and/or Birds directive sites, hosting priority habitat types and priority species within the meaning of the EU Habitats DIRECTIVE /Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora/.

If anyone would follow the above link, the HPP monitoring platform will display the full beauty of hydropower in Bulgaria. However, to get our point hereafter it will be much easier to watch the following videos, showing some Bulgarian operational HPP water catchments in dry months. Then everyone can understand how "sustainable" hydropower is in all the Balkan states, and who knows - some of these HPPs could be financed by the EIB. The videos are very short - less than half a minute, but if you don't have the time to see them all, pick up any three at random order and watch them, please:

https://www.youtube.com/watch?v=0mz1nGqJ4cw https://www.youtube.com/watch?v=Fq4ZVHpjfyA https://www.youtube.com/watch?v=7nIQp272qNs https://www.youtube.com/watch?v=OJxOwJP_w50 https://www.youtube.com/watch?v=yPAskCMI8KI https://www.youtube.com/watch?v=4ToGKuEINkY https://www.youtube.com/watch?v=bXtPIM_9n_k https://www.youtube.com/watch?v=4ZcSDw_5cYY https://www.youtube.com/watch?v=3UJOIONNOPY https://www.youtube.com/watch?v=zk8hcF_QiE0

We have hundreds of videos and pictures like these uploaded on our monitoring platform. All the water catchments displayed in the videos are located in Natura 2000 habitats directive sites. This brings us to the following problems in the Guideline:

1. Hydropower No Go Zones

After a thorough review of the document, we have discovered serious shortcomings on this particular issue that are leading to direct infringements of EU law. The only No Go Zones that are specified in the Guideline are the UNESCO World Heritage Sites - both Natural and Cultural. Nothing else matters but the UNESCO Sites, never mind that the Planet is full of many other areas of outstanding biodiversity conservation value including the Natura 2000 Network and the Emerald sites in Europe, that haven't had the luck to be recognized by UNESCO as heritage. For example National Parks like Mavrovo and Pelister in Macedonia, the Viosa and Valbona Rivers in Albania, the Una and Neretva rivers in Bosnia etc. etc. These sites host endemic species of exceptional value to biodiversity - for instance salmo peristericus in Pelister NP or the

Balkan lynx in Mavrovo NP, of which only 50 specimen are supposed to be left in the whole world!

We find that the Guideline poor approach towards hydropower No Go Zones violates the EU Habitats Directive article 6.4 - second sentence, which rules:

Where the site concerned <u>hosts a priority natural habitat type and/or a priority species</u>, the only considerations which may be raised are those relating to human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest.

Now, <u>small</u> hydropower obviously does not fall into the scope of the above regulation because it has nothing to do with human health, public safety, overriding public interest etc. Then, whereas the area concerned hosts priority habitat types and/or priority species, as well as any other kind of endemic and/or critically endangered species in the rest of the world, the EIB should not finance small hydropower otherwise the bank will breach the law. Large scale hydropower should not be financed in such zones either, unless it is of multipurpose use together with drinking water supply and the reduction of flood risks in large territories, as a priority reason for the construction of a new dam - that is exactly what EU Habitats Directive article 6.4 is telling us.

This should be applicable not only in Europe's Natura 2000 or Emerald and Ramsar sites, but all over the world in order to avoid double standards. It is totally unacceptable if EU financial institutions are putting some efforts to protect environment in the EU and at the same time they are carelessly killing biodiversity hotspots all over the rest of the world.

Furthermore, it is not only the EU Directives that matter, but all the other treaties, regulations and principles underpinning Union law, as well as the relevant decisions of the European Court of Justice. Here are some of these:

Decision by the European Court of Justice on 01.07.2015:

Article 4(1)(a)(i) to (iii) of Directive 2000/60/EC [the Water Framework Directive] must be interpreted as meaning that the Member States are required — unless a derogation from Art 4(7) is granted — to refuse authorisation for an individual project where it may cause a deterioration of the status of a body of surface water or where it jeopardises the attainment of good surface water status or of good ecological potential and good surface water chemical status by the date laid down by the directive.

COMMUNICATION FROM THE COMMISSION

Guidelines on State aid for environmental protection and energy 2014-2020 $2014/C\ 200/01$

(6) It should be recalled that the Resource Efficiency Roadmap (5) as well as several Council conclusions call for a phasing out of environmentally harmful subsidies (6). These Guidelines should therefore consider negative impacts of environmentally harmful subsidies, while taking into account the need to address trade-offs between different areas and policies as recognised by the flagship initiative. Aid for the extraction of fossil fuels is not included in these Guidelines.

It is an undisputed fact that hydropower always leads to degradation of the ecological status of the affected rivers, therefore we really hope that the above citations will be taken into consideration in the final draft of the Guideline when hydropower No Go Zones will be correctly specified. The message in the Guideline so far is that all the problems can always, everywhere be solved by means of the "E-flow" determination and some poor mitigation measures like the fish passes, including in the areas of outstanding biodiversity value. This is a very wrong message which is totally unacceptable to us.

Another type of No Go Zones must be considered when hydropower, no matter the scale, leads to resettlement of people or to direct risks to human health and public safety, but we will come back to this in the comments on the relevant sections of the Guideline.

2. Independent hydropower impact assessment.

All the EU financial institutions, including the EIB, have huge experience in hydropower investments so far. It is a proven fact, that the reports submitted by the operators are not reliable at all - for more details see the *INTRODUCTION* again. These reports are paid by the operator, remember? Having in mind the situation with the legal framework and our huge experience with documented infringements - like in the VEC Svoge case or in all those videos above as well, we strongly believe that a wide programme for <u>independent</u> ecological impact assessment of <u>all</u> existing HPP and dams that were financed by the EIB should be carried out to get a clear picture of all the benefits and all the damages produced, in order to draw the necessary conclusions for any kind of future hydropower investments. Of course the EIB Guideline will need adjustments according to the results of this independent monitoring.

Alternatively the bank decision makers may chose to keep believing the promoters that everything is fine, but they will have to answer questions very soon why undertakings always leading to environmental and to social harm were financed with the public resources collected among all the European taxpayers - see the following section 5. to learn more about it.

And when we say "taxpayers", it obviously goes for the hydropower operators too, which is another big issue to be checked - do they pay some taxes at all? Our experience here in BG shows that they do not declare any profit, hence they pay no taxes to the municipality or to the state - see the VEC Svoge case for proof. And yet another issue to be checked in case they pay some taxes is where does the money go - to compensate the local municipality that suffers from the adverse impacts, or elsewhere in the state, where taxes can be hidden in many different ways?

3. Sustainable hydropower and the regulatory legal framework.

During a thorough review of the document, we discovered many times the same words - "ecological flow", "mitigation measures" /meaning fish passes most of the time/, "cumulative effects" to be taken into consideration etc., to justify the upcoming damage. Yet there are no common European legal rules for these.

There are no common European legal rules for the **"ecological flow"** determination and how to measure the flow bellow the water catchments for example. Some EU Member states have different national rules, but in Bulgaria and in the EU we don't.

There are no common European rules for **Fish passes** design, maintenance and monitoring either. There are too many different documents, guides etc., yet none of them mandatory for all the member states. The picture on the front page of this document displays a fish pass here - it is not a mitigation measure by any means, it is a trap for fish. It costs some **100 000€** at the very least and is called a "mitigation measure" in the AA report... Then every body's happy, except for the protected area, the river and the fish.

We also will discuss the **"cumulative effects"** and the ways they are strangely taken into consideration in our country by eminent scientists - in all of the AA and EIA we have checked. No wonder - those scientists are getting paid by the future hydropower operators, remember? If they find something wrong - they will not get paid.

Therefore it is our strong belief that In Europe we need to have some strong common European rules for things like the above, addressed to the different types of rivers and their habitants. We also need to have a **common European Hydropower Design Code** like the EUROCODE structures' design system for example and many other common rules. Mandatory they have to be, not only in protected areas, where they have to be most stringent.

3.1. Hydropower and dam design regulations

Here is a very important statement from section 6 of the Guideline:

The guidance does not replace or preclude the need to implement detailed dam safety studies: it is only meant to briefly illustrate the hydropower-specific issues that need to be addressed. It also does not elaborate on methods, codes or safety standards to be applied, since these are covered by more detailed guidance produced by organisations such as ICOLD.

Well, at the same time each of the ICOLD bulletins starts with the following warning:

The information, analyses and conclusions in this document <u>have no legal force</u> and must not be considered as substituting for legally-enforceable official regulations.

.....

<u>We decline all responsibility whatsoever</u> for how the information herein is interpreted and used <u>and will accept no liability</u> for any loss or damage arising therefrom.

For proof see:

https://www.scribd.com/doc/137327814/ICOLD-Bulletin-148

As we pointed out in the *INTRODUCTION*, the hydropower lobby is not used to bear responsibility for what it does therefore they do not like to follow any kind of regulation that will have the legal force to hold them responsible if some kind of damage has occurred. The EIB Guideline states as well, that it does not elaborate on methods, codes etc. and this is only normal, since such codes do not exist. But then - WHO will be responsible, dear friends from the EIB? **How can hydropower be always referred to as "sustainable"**, when there are no rules of legal force?

And if that goes for the safety of a dam, the more it goes for all the other devastating impacts on nature and on local people wellbeing that always happen to occur as a result of huge amount of public money wasted so carelessly!

3.2 Ecological flow determination and measurement

It should not be called "ecological" in any modern guideline to start with in the first place. We find that residual is a much more appropriate word to be used, otherwise unaware public is deceived that everything with ecology is fine, while it is not.

The Bulgarian Water Act rules that, in order to achieve the objectives of providing good ecological status in rivers, a minimum allowable flow below water catchments must be discharged. It is also claimed that the Minister of Environment and Waters must release a Methodology for the minimum allowable water flow determination, within a period of one year after the Act was published. Still, eleven years since, there is no sign of the named Methodology at all. It is also said that until the methodology is released /i.e. - temporarily within one year/ the minimum allowable flow is defined as 10% of the average multiannual /long term/ flow, but not less than the minimum average monthly flow within 95% reliability. This definition, incorrect and imprecise as it is, often leads to gross errors as a result. For example - for Preboinitsa river, located in a Natura 2000 habitats directive site in a karst region, a minimum water quantity discharge of 40 l/sec. is defined for a new HPP - being 10% of the average multiannual river flow, knowing that within 200 meters after the outlet those 40 liters will sink into the karst grounds, leaving during summer no water in the river at all

The Appropriate Assessments of the **RBMP 2010-2015** for all river basins in Bulgaria determined more stringent requirements for Natura 2000 habitats directive sites:

The water permits for HPP should not allow more than 30% of the average annual flow to be diverted.

This rule was applicable for all Natura 2000 habitats directive sites, with the National Parks included. It means that most of the time the minimum flow **should not be less than 70%** of the average multiannual flow, unless the natural flow is smaller.

And finally - the Appropriate Assessments of the **new RBMP 2016-2021** for the Danube and the East Aegean river basins in Bulgaria rule the following

The minimum allowable water flow bellow the water catchments in Tsentralen Balkan National Park should not be less than 30% of the average multiannual /long term/ flow.

In the new RBMP 2016-2021 there are no special requirements included for the other Habitats directive sites, which means that the 10% required by the law are applicable in Natura 2000, even for the other National Parks.

Now, what is going on here and do those experts know what are they really doing? Once the ecological flow had to be 70% of the average in all Natura 2000 sites and the next time - only 30% - only in one of the National parks and for all the rest protected areas it has to be only 10% again? Which of these "expert" recommendations is the EIB ready to adopt in its good new Guideline?

Actually - the mere truth is that nobody here knows anything about the residual flow, because there are no rules! Neither Bulgarian, nor European!

We have to stress yet another very important issue:

Regarding the diversion type HPP, it turns out that not only the ichthyophauna in the river section between the barrage and the turbine house is destroyed, sentenced to an agonizing death when the river dries up to the bottom. There is a bigger problem here the river doesn't stay dry all year long. During rainy periods, or in springtime, there runs water enough. Then, fish and other aquatic species enter the zone in search of better living conditions and spots. When the river dries up again - it becomes a trap for them over and over again. This is especially harmful during the reproduction period of those species, when they migrate upstream to spawn, with the additional risk for the caviar to be laid on spots that will soon get dry again, the same applicable to the offspring, of course. Thus - drying up of rivers becomes much more harmful not only for the river section of HPP operation. Having in mind that most of the small HPP in the Balkans are located in the trout zone, with those strong migrating instincts of the trout, besides the hydropeaking, drying up of rivers is also causing irreparable damage to the fish population in a much wider zone of the entire river below the power house. Especially, when the fish passes are not fit to provide options for the migration of trout, holding them back in a section of the river that will soon dry up again.

That is another reason why the residual flow determination is so important. It is not a matter of discussion whether it should be increased in the spawning period of migratory river habitants and during warm water periods in the summertime.

The same is applicable to the absence of regulations concerning the ways to measure the same residual flow bellow the water catchments, but this time there are no legal rules at all! At least - in Bulgaria there aren't. We have not heard that there are such at European level or elsewhere too.

As the EIB Guideline does not say a word about the residual flow measurement as well, does this total anarchy still sound "sustainable" to anyone?

Finally, in the Key references of the Guideline the EC DG ENV, 2015: WFD CIS Guidance Document 31 is listed. This document does not hold any specifics on the residual flow determination and measurement whatsoever, but only big words and good intentions, just like the EIB Guideline itself.

3.3. Fish passes - a mitigation measure or not

It is a well known fact that fish passes are not a panacea. They really provide only for the upstream migration of the fish to some small extent, sometimes for the migration of other aquatic species as well. If they are properly designed and built that is.

The water catchments in Bulgaria however, are usually equipped with strange looking structures that are proudly called "fish pass" by the HPP operators, but they can fool no one, including the aquatic species and the fish. Here are some examples:









We will discuss only the last one, which is symbolically displayed on the front page of this document. It costs some **100 000€** at the very least and is called a "mitigation measure" in the AA report for the HPP project's implications on Natura 2000 Habitats directive site conservation objectives. The fish pass follows strictly the East Aegean RBMP 2010-2015 regulations, which are based upon the famous "*Fish passes design dimensions and monitoring*" - FAO ISBN 92-5-104894-0

Only one small detail though - it's written in the FAO document that "close to nature" and "technical" type fish passes provide for the migration of the fish, when the difference between the water levels is within the limits of no more than 6-10 meters, not mentioning the type of river and the type of fish. We have read many other modern fish passes Guides in which such limits are not even specified.

Now, the fish pass on the last picture is obviously anything, but a mitigation measure. It actually is a trap. In case a fish is attracted to the entrance, it will never reach the exit - it will fall down on the ground no more than halfway the entire distance to the top, depending on the water speed and to the turbulence. Then why were all those money spent - as an excuse to brush and shine somebody's consciousness remains?

There are no common European rules for **Fish passes** design, maintenance and monitoring specified for the different types of rivers and their habitants. Too many different documents, guides etc., yet none of them good enough to be accepted in the EU as a mandatory document for all the member states.

We therefore find that the EIB Guideline had to recommend the real good solutions. It must have started with the following good definition - *Fish passes are manmade bioengineering structures integrated in, or built around migration river barriers, for which it's proven by an independent monitoring*¹, that all^2 migrating³ aquatic species /reported in the past and present nowadays/ can easily and quickly⁴ find the entrance and get in, and at least 80% of them can reach the exit as fast as possible and move ahead, both up and downstream the river, all^7 the time throughout the year.

Please note the words marked with superscript numbering, because too many sources, published by different authors, point out different priorities or give different excuses for not achieving some of the objectives laid down in the above definition. Due to the limited space, only the No 1 will be discussed here:

 Should it be proven by an <u>independent</u> monitoring that fish are passing through or not? Now this is a crucial issue - some authors say that fish may not be motivated at the time of the monitoring (Ovidio et al. 2007), but that can only be due to a wrong time judgment of the experts, other say that the river may not host any fish at all for various reasons - poaching, pollution etc. (Uzunova 2017)

Now here we have to get back to those videos above, because the absence of any fish gives every hydropower operator such a good excuse for his fish pass to fail the monitoring and at the same time the absence of fish can be achieved so easily. Just extract all the water from the river to kill the fish like in the videos above, or kill it any other way, and the deal is done - your fish pass cannot be assessed as being ineffective, with the excuse that there is no fish in the river.

The other numbers in the above definition point out too many different opinions - some authors propose priority to be given to the protected or priority fish species (Uzunova 2017) and to the conservation status (Prato et al. (2011); to the mature for reproduction, rather than to the juvenile fish; most discuss only the fish and say nothing about the other aquatic species; percentage of success is really a matter of discussion; only during the spawning migration period or most of the time, at least 300 days per year or less, except for low water periods; priority given only to the pronounced migrants; etc. etc.

Then it's obvious that in the absence of a legal framework with no mandatory rules, everyone is doing what is best for the operator to mitigate the cost of the fish pass, no matter if any fish will be able to pass through or not. The fish pass on the last picture is not cheap of course, but the only possible type of fish pass that is applicable in this case of big difference in water levels /around 35 meters/ is the Fish Lift type, which is much more costly.

Moreover - some fish passes are much more effective than other. It's always best to use the "close to nature" types of course, but in Bulgaria we do not have a single one of these. 99% of the fish passes here are the "Pool" type technical fish passes, which have proven to be absolutely inappropriate for the purpose. We also have only one "Denyl" type fish pass which is also inappropriate for the fish species in BG rivers and only one "Vertical slot" type of a fish pass. Here is a video of many fish passing through the only "Vertical slot" type fish pass in Bulgaria on the Tunja River, displaying upstream migrating fish:

https://www.youtube.com/watch?v=upvrGsQ3nel

And here is a partial photo of the fish pass:



Video and photo credit - Mladen Angelov

At a conference held in Sofia in March 2016, Austrian *prof.Stefan Schmutz* declared that, after a thorough research in Austria, the only technical type of fish pass allowed there is the "Vertical slot" type and obviously there are many reasons for that - there is no room here for these reasons to be explained.

So here is another one of the big shortcomings in the EIB Guideline:

- 1. There should be a recommendation that the only acceptable to the bank type of fish pass is the "close to nature" type. From the "technical" types only the Vertical Slot type should be permissible in very rare cases.
- 2. Dam walls higher than 10 meters in the trout zone and 6 meters in the carp zone should not be acceptable to the bank, unless derogation under WFD article 4.7 is granted, because migration will be fully blocked and money will be wasted.

Finally - there should be many requirements in order to provide for the downstream migration of the aquatic species, for which there is no room here too.

For example - at the Lipkovo HPP and at the Tearce Cascade in Macedonia, which are financed by the EIB, not a single fish can migrate downstream. Here we will just mention some of the measures that can be applied:

Fish screens - they are a measure alright, but they don't provide for the downstream migration, they prevent the fish from entering the turbines - depending on the water speed in front of the turbines, because when it is too high - then the fish can't get away and the screen turns into a trap. Limitation of the water speed at the screens, or at the turbines, also has to be defined - **0.5m/sec** in the carp zone and **1.0m/sec** in the trout zone! **Trap, transport & release** - it is worth the efforts only if the fish migrates only once in a lifecycle. In the inland rivers of Bulgaria such kind of fish /eel/ is very rare - only in one or two rivers to our knowledge.

By-pass channel - it is really the best solution, if there is room enough, and if some special measures to attract the fish are undertaken, which is not so easy.

It should be noted, however, that in Europe majority of these technologies has not proven efficient yet. But then they do not mitigate a thing, do they?

Yet there are many other cases in which a fish pass cannot be considered as mitigation measure, for example at the big dams. There is no sense in spending money to move a river fish from a running river into a big dam, because it hardly will survive in steady waters. If there is a natural migration barrier near to the future artificial one, there is no sense again - just like in the Tearce Cascade upper intake in Macedonia. Then, following the principles of the WFD - the polluter /operator/ must pay, and the money must be spent for other river restoration measures, but this is another long story.

In the end of this section we will repeat it again - fish passes are not always a mitigation measure, especially when they are improperly designed. That is why they should be treated very carefully otherwise the money of the bank will be spent for nothing. And if the <u>independent</u> monitoring shows that fish are not passing through even after some improvements of the fish pass - what happens then? Who will bear responsibility and who will pay again? There is no answer to this question in the Guideline!

3.4. Cumulative effects.

In the course of studying the new RBMP 2016-2020 of the Danube region, we discovered a map, displaying all operational at present and future HPP along the Iskar River, which we will use as an example of what is going on:

ВЕЦ на територията на Дунавски район за басейново управление

HPP at the Iskar river

To be enlarged and studied in detail, the map can be downloaded from the following link, which is essential to be followed and enlarged, to get our point: http://dams.reki.bg/uploads/Docs/Files/HPP_at_the_Iskar_River.jpg

The map is extracted from the Danube River Basin Management Plan. In the ellipse it shows the beauty of the future river status with 35 /thirty five/ HPP, from the Iskar Gorge in the Balkan to the Danube to be built. It should be taken into consideration, that each of the HPP lakes will be about 3 - 4 kilometers long at the average... The big blue dots are the operational HPP and the small yellow dots are the future ones. It is obvious that the river will simply cease to exist, while the greatest part of it is located in several Natura 2000 Habitats directive sites, designated for the protection of river habitats and species.

The first conclusion to be made is that here is another case in which fish passes are not a mitigation measure. There is no sense in providing options to the river fish to move from one lake with steady water to another - thirty five times, one after the other.

The second - what about the "ecological flow" between one dam and another, when there will be no flow at all?

And how were the cumulative effects taken into consideration along the Iskar River by the "experts"? We will display briefly the case of the Sreden Iskar cascade, which was financed by the EBRD, but could have been financed by the EIB quite easily under their brand new Guideline, simply because those 35 pieces are listed in the RBMP, and it is stated in the EIA/AA report of the Sreden Iskar Cascade that there will be no problem at all - that report was paid by the operator remember? In this way EIB requirement No 55 in the table on page 16 of the Guideline would have been followed and everything is OK.

The **Sreden Iskar cascade** consists of **9 /nine/** of those **35 HPP** along the Iskar River. Five of the HPP are already operational in the Iskar Gorge. The remaining four HPP will be part of the future Third Stage of project development. Three of the existing HPP /Lakatnik-Svrajen-Opletnya/ are in a cascade connection, meaning that the next lake starts at the barrage of the previous, thus the river is not running free in between.

For the third stage of the **Sreden Iskar cascade** an Appropriate Assessment was prepared alright. We discovered the following document under a request by our friends from CEE Bankwatch Network to study the present status and the future Sreden Iskar cascade third stage of project development.

Here is the report on the Appropriate Assessment /AA/ of the project implications on Natura 2000 protected area sites Zapadna Stara Planina I Predbalkan BG 0001040, Iskarski Prolom-Rjana BG 0001042, Ponor BG 0002005 and Vrachanski Balkan BG 0000166.

http://www3.moew.government.bg/files/file/Nature/Natura%202000/DOSV/kaskada_l skar.pdf

The third stage consists of four HPP - Bov South and Bov North, Levishte and Gabrovnitsa.

Acc. to the report, the lakes of the future HPP are located partially or entirely in the above Natura 2000 sites. Again between Bov South and Bov North there will be no river running. Much worse - the Levishte and Gabrovnitsa lakes will be adhered to the existing three HPP - Lakatnik-Svrajen-Opletnya... just to increase the section of the river where it will not be running free.

Still, many times it's written in the above report that fish passes will be built to mitigate any possible negative effects, hence everything will be just fine.

This is how cumulative effects are taken into consideration in Bulgaria, as far as biodiversity protection is concerned. And since the EIA/AA report was acceptable to the EBRD, there is no reason to believe that it will not be acceptable to the EIB even under the bank's brand new revision of the Guideline.

Needless to say that there will be <u>unsolvable</u> problems with the sediment downriver transportation.

And how about the flood risk - what will happen if a high wave comes along, after a heavy rainfall in the catchment area of the longest river basin in Bulgaria, with 35 dams full of silt?

And how about the effects on global warming - does anyone really believe that hydropower in this case will be of any help? With an average installed capacity of 1.5 MW - the overall power of those HPP will be no more than only 50MW. And some 120km of a running river will be turned into large lakes with higher temperature of steady water, combined with eutrophication processes and the consequent methane release. Methane is some 25 /twenty five/ times more harmful than carbon dioxide, as far as global warming is concerned - did you know that?

IMPORTANT:

The present five HPP of the Sreden Iskar Cascade were built in some kind of joint venture between the Svoge municipality and an Italian investor. The municipality contributed the plots along the river. From the very beginning of the cascade operation the Italian investor declares no profit to be divided between the shareholders and obviously pays no taxes thereupon. Full description of the Cascade devastating impact on nature and on local people lives can be found in our report on the VEC Svoge case, which we have already shared with the EIB, hoping that some lessons will be learned.

In the end of this section we will stress this once again - the Cumulative Effects Assessment is part of the EIA/AA report. This is paid by the promoter with the money of the bank. When the "experts" hired by the operator state that everything is fine, then everybody is happy. And if they state that there will be a problem - they will not get paid! The question is - how will the EIB react according to the brand new Guideline, if an independent source reports the damage? Will the bank hold anyone responsible and how? And the answer is - there is not a single word about this issue in the Guideline!

Moreover - the EIB itself has financed the Tearce Cascade in Macedonia totally disregarding the problem with cumulative effects, never mind that in its own Guideline it's written that:

Some of the most significant cumulative impacts that <u>can occur</u> in relation to hydropower are the result of multiple installations, <u>sometimes</u> in a cascade arrangement, on a single river, or in several tributaries within a river basin.

New cascades are prohibited even in Bulgaria since 2010, dear friends from the EIB! Therefore the words can occur and sometimes in the above sentence must be changed - impacts <u>inevitably occur</u>... <u>always</u> in a cascade arrangement. Otherwise the Guideline can be assumed to be a real good old timer, being totally out of place and out of time in the 21st Century.

And what was the reaction of EIB after the Broken Rivers Report of CEE Bankwatch Network for the Tearce Cascade? The reaction was zero, because such situation is not addressed in the EIB Guideline at all!

Due to their devastating impact cascades should not be financed by the European financial institutions even if there is a possible derogation under article 4(7) of the EU WFD!

4. EIB hydropower investments through financial intermediaries (FIs).

Transparency in this case is another huge problem, because EIB should not hide behind those FIs. All the projects financed through FIs must be listed on the internet site of the bank, so that the public is informed that a given undertaking is indirectly supported by EIB. We find that such support is something the bank should be proud of, instead of being ashamed. Again this is a question of responsibility we have discussed in the previous sections so many times. Because, like for the preceding problems, always the same question arises - what happens when some damage is discovered, regardless of the good intentions at the beginning of the project? Who will be held responsible and who will pay for the damage?

IMPORTANT - even we, with all our huge communication potential and skills, with all our contacts at the highest levels in our country, have no idea if the EIB has financed some of the HP plants here in Bulgaria through FIs. Therefore we will now check the transparency preparedness of the EIB management by asking for a kind answer to the question: **Which of the HP plants in Bulgaria were financed through FIs with the financial support of the EIB?**

If we get the answer, we promise to carry out our full independent investigation of these plants' performance and to submit a report to the EIB for free, just like we did in the VEC Svoge case, where the results were forwarded to the EBRD. Thus the EIB will know much more about the implementation of the bank's previous Guidelines for its projects in Bulgaria and may draw some positive conclusions.

Moreover, recently there was a huge case of successful hard local opposition against a hydropower plant near the village of **Krushchitsa in Bosnia and Herzegovina**. All the local women were blocking a bridge for 325 days, day and night, to prevent the heavy machinery from reaching the river. Those women were beaten by Special Forces, sent by the corrupt state authorities and the investor. Yet the banks that have financed this project still remain unknown. So we challenge the EIB to study the case and to check if the bank has something to do with this particular case - no matter directly or through FIs /which is more likely/, and tell us to spread the news among our friends from all over the Balkans.

No matter if the EIB is involved somehow or not, the case study might be very useful in terms of checking the expected performance of: *The EIB Group Strategy on Gender Equality and Women's Economic Empowerment* in a case when local women

are beaten for the sake of hydropower! Special Forces against barehanded but angry Local Women - there could have been casualties on both sides, you know?

4. The "Sustainable" future of hydropower in modern world.

Here we have to recall that we are living in the 21st Century in Europe, hoping that the EIB decision makers do the same. There is the Internet around the world these days and such hydropower monitoring platforms like ours can be widespread all over very soon. And showing to the public the hydropower devastating impacts has turned out to be the most powerful weapon in our fight to save the last remains of our beautiful rivers.

The driving force of the Guideline is clear enough - too many countries in the old EU have already killed their rivers fair and square and are looking for new blood. And there is local opposition in these countries that will cause some problems in the future. That's why many hydropower companies are sniffing and circling around the Balkans, where the last few pristine rivers in Europe still remain untouched.

But we have some bad news for the European Investment Bank and for all those hydropower companies that have so obviously inspired the Guideline - **hydropower is a dirty word around here now**, in the Balkans it definitely is today.

And if the existing HPP operators keep doing what they do, if the administration /National and European/ keeps not doing what it is supposed to in order to protect the rivers, if the European financial institutions keep financing the damn things all over the modern world, and we and people like us keep showing to the public the results - hydrotechnics will become a dirty word, if that has not already happened either.

Rivers are the veins of Nature and every normal human being has special feelings towards them. Feeling better when we see them running, watching them gunpowder dry is very hard to overcome. We have almost unlimited resources for communication, our HPP monitoring platform is visited some 5000 times per day at the average and everybody knows today what's happening, thus the consequences are inevitably coming.

Just one example - for the last three years the University of Architecture, Construction and Geodesy in Sofia has **0** /zero/ students in hydrotechnics, due to its devastating fame. One or two candidates per year, but zero students in the entire country!

And what about the rating of EIB and/or the rating of EBRD? We prefer not to discuss it here, but in the next consecutive complaint that we will lodge with DG Environment of the European Commission. After nine consecutive complaints, there is an infringement procedure on the hydropower issues coming in Bulgaria soon, and some of the hydropower plants financed by the European financial institutions under their Best Practice Guidelines will Be Removed - that is a promise!

So the EIB decision makers need to deeply reconsider what will happen next when the hydropower issues are addressed in the rest of the modern world in the same way like we do in our country, especially in the Balkans, where everybody knows what hydropower means and everybody fights. Of course, they may keep on believing that nothing will ever change and that reports like the Broken Rivers can be thrown in the trash so easily. Then we shall see what happens next even when such old fashioned documents like the Guideline we are discussing here are adopted and fully implemented without due consideration of the problems that we raise.

In this respect, the EIB Guideline reminds us very much of the Appropriate Assessments in our country and the way they are prepared. Full of citations of the EU legal framework, full of good intentions, many problems missed, full of recommendations that are not mandatory, no one bears responsibility..., and the Guideline still promotes future investments in hydropower plants? Only one key difference that we can see -

unlike the AA reports here, the Guideline is paid by the EU taxpayers, not by the hydropower promoters, is it not, or is it?

5. General conclusion

In the end of this paragraph we will stress this once again - judging from our own experience, too many mistakes have been done in the whole Balkan Region due to the lack of proper due diligence carried out by the EU financial institutions which prefer to believe the local authorities and local environmental "experts" that are always proving everything will be fine with no exception. The other name of hydropower in the Balkans is Corruption and we have not a single reason to believe that things are any better in the rest of the world.

But in 2016 the EBRD has announced a tender procedure for the **Iliyna HPP** here in Bulgaria which was totally illegal. It was approved by the corrupt state authorities in a corrupt EIA/AA procedure. We managed to warn the bank about it and then they have discovered the infringements in the last minute to be able to cancel the grant from the Kozloduy Decommissioning Fund. We also managed to block about 15 future HPPs at a different stage of development, two of them in the middle of construction, due to huge infringements of the environmental legal framework. Judging from the quality of its Guideline, it is possible that some of these 15 pieces were supported by the EIB.

But what would have happened if we have informed the EBRD after the money was spent and the power plant was ready to operate in the Iliyna case? We would have blocked it in the Court of Justice, it would not have started working, the money would have been wasted, construction works must have been demolished and someone must have had to bear responsibility for the mishap.

This is the biggest drawback of the Guideline we are discussing here - the blind support for the Corruption, wishfully believing the corrupt environmental "experts" that everything will be OK, aiming to develop controversial hydropower in the most Corrupt industrial sector in the most Corrupt states in the world, without a single word about bearing responsibility for any future damage! What are you trying to imply in your good Guideline please - that hydropower does not cause deterioration of the surface water bodies, or that good status/potential of a river can be attained after a hydropower plant is built? Do you really believe yourselves? Because nobody else believes, you know!

III. DETAILED COMMENTS ON THE GUIDELINE

Here we will comment in detail certain problems in each of the Guideline sections, always having in mind the general notes and the conclusion in the previous paragraph.

1. Introduction

In this section and everywhere else in the Guideline words like <u>potential</u> negative impact of hydropower must be replaced with <u>proven</u> or <u>unavoidable</u>.

On page 2 of the Guideline financing through financial intermediaries (FIs) is discussed. Transparency in this case is the key issue, because EIB should not hide behind those FIs. This problem is discussed in section 3.5 of this document..

On page 2 of the Guideline in box 2-third black dot, pSCI of the Natura 2000 network must be included, otherwise they are always missed.

On page 3 of the Guideline independent "experts" are discussed. We have shown how they are getting paid hence there is no reason to believe that they can be independent. However, if a given expert is trying to get into the bank's "independent panel", this can happen only after a thorough check up of his (or hers) previous participation in some EIA/AA reports. Check the final result after three years of operation of a given HPP the expert has approved, check if the recommended "mitigation" measures

he or she has proposed are doing any good, and you will find no "independent" experts in the Balkans!

On page 3 of the Guideline the design standards are discussed. We have discussed this issue here in section II. 3. and will not repeat it again.

On page 3 of the Guideline resettlement of people is discussed, which is absolutely unacceptable in the democratic world - see the *INTRODUCTION* of this document!

Now the following is really huge - in Box 3 on page 4 of the Guideline it is stated that: The EU Water Framework Directive (2000/60/EC) requires that https://example.com/hydropower projects-bullet: hydropower project

This is a huge direct lie! The word "hydropower" does not even exist in the EU WFD, dear friends from the EIB!!! The full meaning of the WFD objectives leads to the implementation of certain measures that are specified in the RBMPs and must be implemented by the state authorities to reduce the impacts of hydropower and the other polluters. When hydropower is concerned, such measures always include:

- Forced decommissioning of old hydropower plants
- Forced reconstruction of old hydropower plants aiming to reduce the adverse impacts - usually by building new or improving existing fish passes.
- Setting bans on hydropower in the water protection zones for bathing, for recreation and water sports, Habitats directive sites hosting priority habitat types and priority river species, the zones for economically valuable fish species etc, etc.

There is absolutely no way for new hydropower plants to be of any help in achieving good status/potential, since they always lead to deterioration of the river status! The meaning of the mitigation measures is not to fully eliminate adverse impacts, but just to reduce a small part of them - it is that simple. The other part of the damage is unavoidable and irreversible.

If anyone does not agree, then give us a single example of the opposite! For instance - name a new RBMP, wherever in Europe or elsewhere, in which a new HP plant is listed as a measure to achieve good status of a river /or potential of HMWB/, or to prevent deterioration!

Now, at this point, after such a huge lie in the Guideline, we will cease further comments in this document, because there is no sense in any further efforts at all. It is obvious now that the Guideline is inspired by the hydropower lobby, which we do not believe we will ever be able to convince of anything.

In the Guideline itself we will highlight some of the other problematic texts and will stick comments to the highlighted texts and that will be all from us.

But there is another issue of a huge importance we feel the need to warn the EIB decision makers about in the following section.

IV. HYDROPOWER AND THE PUBLIC INTEREST

We can endlessly elaborate on this one - if anyone is interested, it's best to study in detail the **Krushchitsa HPP** case in Bosnia and Herzegovina that was mentioned before... We will only try to explain in brief the following:

The impact of dry dead rivers on the chances for local rural development - depending on agriculture and livestock breeding, and for all kind of river depending tourism - mountain, eco, kayak, rafting, rural, fishing, hunting etc. is quite obvious, therefore we shall not dig in it in detail. But we have many villages and cities that have

problems with the drinking water supply, for the sake of hydropower - what Guideline should we follow in such cases?

We will also show only one case that happened in 2016 - the deliberate killing of Natura 2000 habitats directive site **Bilernitsite BG0000593**:



At least 20 kilometers downriver full of toxic silt and the water is not suitable for domestic and wild animals to drink and is not suitable for irrigation purposes either. Fishing, hunting, bathing, Water sports - all of them are dead. Those villages downriver are sentenced to live in misery alongside their dead river for at least a decade.

Therefore the EIB decision makers must also have in mind that there is a very important social issue to be considered in any Good Guideline on hydropower. In recent years local people here have started to fight against HPP Investment Plans, each and every time they hear of such, just because they've already witnessed the damage caused to nature and to the people's wellbeing by new HPPs in the neighboring villages and rivers.

It has already happened in the BG villages of Rebarkovo, Lyuti brod, Svode, Lakatnik, the cities of Samokov, Smolyan a. o. It has also happened in Porominovo and Barakovo villages along the Rilska River. In the cases of Barakovo and Samokov the local people have brought the case in the Supreme Court of justice and won the case. In many other cases our Ministry of Environment has stopped the projects upon our objections, knowing that if they hadn't stopped them, they would have lost the cases again.

For the Krushchitsa HPP case just yesterday the news came that local opposition has won the case in a Court of Justice too and it could have been supported by the EIB under the bank's brand new Guideline, if it's not.

In recent years free anglers and angler's associations started to fight against hydropower too. Here is some proof for the pressure: http://bnr.bg/horizont/post/100668682/ribolovni-sdrujenia-na-protest



These people raise their voices against hydropower, for the simple reason that they have already witnessed its adverse impact on river ecosystems and they've had enough of it. There are many more like them to come in the future.

We therefore think that a Good Advice for all the hydropower promoters and for the promoting banks as well, on how to deal with local opposition is essential. We strongly recommend for this one - to be addressed in the Guideline much more carefully than it is.

We were also authorized by the above gathering of fishermen to deliver a short stakeholder message to anyone who wants to further develop hydropower in our region, including the EIB. Here it is:

"Dear friends from the EIB,

For all we know, the EIB operates with the public resources of the European Union, collected among all the European taxpayers. It means that part of those finances comes out of our pockets hence we have the right to an opinion.

You have financially supported the boom of hydropower in our region, killed the life in so many rivers, where the damage caused is irreparable.

Now are you trying to promote a new Guideline on how to kill them all?

If you are in such a need for hydropower, look for it in your own countries, please!

If you have rivers to kill no more at home, look for it wherever else you like, but not in our region! Here you are not welcome anymore.

If you can't help it - check as thorough as you can for every case the legal viability, before you try to kill a single river here again. Otherwise we'll meet in court, every time you try to kill the next!

And if you still believe you can resettle someone anywhere, come here try us, then see what happens...

Here is our good Guideline for you: **Stay Away From Our Rivers!**" End of message

Thank you for your kind understanding and cooperation.

"Nature has all the time in the world, we do not".

Place, date and signature of representative:

Sofia, Bulgaria 16.06.2018 /dipl.eng.Dimiter Koumanov/