



„БАЛКАНКА”
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“Balkanka” Association, Sofia, Bulgaria
“Nature has all the time in the world, we do not”.

POSITION

SCOPE: HYDROPOWER AND NATURA 2000
GOOD PRACTICE GUIDE

STAGE: REVISED DRAFT SEPTEMBER 2016



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Sofia, Bulgaria
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БАЛКАНКА

ABSTRACT

As a nongovernmental organization watching closely the hydropower development and practice in Bulgaria, we, the members of Balkanka Association Sofia, welcome the Good Practice Guide. On the other hand, since at least 80% of the new SHPP built in our country in the last decade are located in Natura 2000 habitats and birds directive sites, we have some negative experience to share.

We therefore find the appearance of the Guide being slightly overdue. It simply is too late already - in Bulgaria it is. Having vast and negative experience with hydropower in our country, we feel the need to share our uncertainties and fear, since the Guide in view sounds not like an obstacle in front of hydropower in Natura 2000 but, rather, more like an encouragement to keep developing it there. Good practices are one thing and real life - another, in our country they definitely are.

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. Maybe some EU Member states have such 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. Too many different documents, guides etc., yet none of them mandatory for all the member states, just like the Good Practice Guide in view will be. 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... 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 after all.

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 Guide for HPP design** and many other common rules. **Mandatory they have to be**, not only in Natura 2000, where they have to be most stringent. Otherwise the Good Practice Guide will be considered only as an encouragement for hydropower in Natura 2000 and no one in our country will follow the recommendations, as far as they are not mandatory.

Here is a citation from the second page of the Guide:

This document reflects the view of the European Commission services and is not of a binding nature.

Then, the beast will be unleashed and yet the Good Practice Guide recommendations will never be of binding nature... Unlike the EC services, we think that the proposed Guide is applicable in non protected areas only, where the objectives of the WFD also have to be achieved. Sites of common interest and special areas of conservation need additional restrictions to achieve their conservation objectives. Here is another citation extracted from the AA of the RBMP 2010-2015 for all river basins in Bulgaria:

"...all types of HPP construction (run-of-river and diversion) produce extremely negative impact on protected areas when more than 20 to 30% of the average river water quantity is taken, that is why they shouldn't be allowed."

Page 108 of the Danube region RBMP 2010-2015 Appropriate Assessment:

<http://www.bd-dunav.org/content/upravlenie-na-vodite/plan-za-upravlenie-na-rechniia-baseyn/purb-2010-2015-v-dunavski-rayon-/ekologichna-ocenka-i-ocenka-za-savmestimost-na-purb-2010-2015/>

Anyone who reads this document, please do have in mind that Balkanka Association has already lodged with DG Environment of the Commission four consecutive complaints. To get a full view on the problems you need to read them - DG Environment case file ID number **CHAP(2015)02363**, because they contain the basic information, which our position is based upon and only a single example out of many will be used to support our point of view in the following document. The Complaints can be downloaded from the following links:

<http://dams.reki.bg/uploads/Docs/Files/EU COMPLAINT.pdf>

<http://dams.reki.bg/uploads/Docs/Files/EU COMPLAINT ANNEX%201.pdf>

<http://dams.reki.bg/uploads/Docs/Files/EU COMPLAINT ANNEX 2 DRAFT4.pdf>

<http://dams.reki.bg/uploads/Docs/Files/EU COMPLAINT ANNEX 3 DRAFT4.pdf>

Acknowledgements

We dedicate the following document to the poor people, living in the villages of Botunya and Glavatsy along the Botunya River and to the people of Lobosh, Jablyano and Zemen along the Struma River. These rivers were located within the boundaries of Natura 2000 Habitats Directive sites designated for the protection of priority river habitat types and priority river species. They were killed by a deliberate refusal of the state authorities to follow the law - being warned for the forthcoming destruction in advance, with all those people sentenced to live in misery alongside their poisoned dead rivers for decades with absolutely no hope for future development in the poorest rural regions of Bulgaria.

We also dedicate our efforts to the poor people in the villages of Barzia and Zanojene, living in the foot of the Stara Planina Mountain /the Balkan/ which is full of water between the peaks Kom and Todorini Kukli, and to the people of Sestrino and Krichim. They are all sentenced to live deprived from access to pure drinking water for the sake of hydropower development.

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ABBREVIATIONS

MOEW	- Ministry Of Environment and Waters of Bulgaria
RIEW	- Regional Inspectorate/s of Environment and Waters
RBD	- River Basin Directorate/s
BDDR	- Basin Directorate Danube Region
EARBD	- East Aegean River Basin Directorate
WARBD	- West Aegean River Basin Directorate
DBBSR	- Basin Directorate Black Sea Region
WA	- Water Act
FA Act	- Fishing and Aquaculture Act
SEA	- Strategic Environmental Assessment
EIA	- Environmental Impact Assessment
AA	- Appropriate Assessment
RBMP	- 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 fario*/ populations in Bulgarian rivers.

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II. BG HIDROPOWER IN NATURA 2000

In the last two years Balkanka Association has set up /with the substantial help of *WWF-Bulgaria/* an internet HPP monitoring platform <http://dams.reki.bg/> - 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 2016 the number of operating HPP in Bulgaria was exactly **258**. Out of these we have already checked **159** 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 cascades have numerous water catchments. For example - the Petrohan cascade operates with three HPP and more than 50 water catchments, about 20 of which we have shot, the Belmeken-Sestrimo cascade - with three HPP and more than 80 water catchments that we know of /25 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.

If anyone would follow the above link, the HPP monitoring platform will display the full beauty of hydropower in Bulgaria. However, since the platform is only in Bulgarian /sorry for that/, it will be much easier to watch the following videos, showing some Bulgarian operational HPP water catchments in dry months. Then everyone can understand - why are we fighting the damn things and why won't we ever give up. 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=Fq4ZVHpifyA>
<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=7ea2k7OrZJU>
https://www.youtube.com/watch?v=zk8hcF_QiE0

We have hundreds of videos and pictures like these. All the water catchments displayed in the videos are located in Natura 2000 habitats directive sites.

A. Rivers in Natura 2000

We believe in general that the approach at European level towards the Natura 2000 Habitats directive boundaries determination is unacceptable, when river ecosystems are concerned. Usually a line is drawn across the river to distinct the area of protection from the non protected area on the map.

Yet river ecosystems are continuous and integrated, hence they shouldn't be divided with a line so easily. For example - removing an inoperative barrage or building a new fish pass at an artificial obstacle to migration beyond the boundaries of the protected area can significantly improve the situation within. Or the destruction of river habitants down-, or upstream the line will also adversely affect those on the opposite side of the line, obviously.

We have many cases here in which the border line of the Natura 2000 site is parallel to the covered river. And its tributaries on the left hand side are included in the area while the others on the right hand side are not.

We also have many cases in which a river enters and then gets out of several Habitats directive sites, with several river sections that are not protected in between. We

see no sense in that. A typical example is the Iskar River in the Danube region - see the map in the following section D.

In all these cases an AA on any project's implication on the Natura 2000 site conservation objectives has never been carried out in Bulgaria, when the project is located beyond the boundaries of the site. For such cases on page 63 the Guide in view recommends:

...the project would still need to be assessed according to the Article 6(3) procedure.

Considering the numerous water permits issued here - it is too late for the recommendation, and the Guide is *not of a binding nature*... pitifully.

B. Ecological flow determination and measurement

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, nine 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% probability**. 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 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 Natura2000 habitats directive sites:

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

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, 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? And what makes the Tsentralen Balkan National Park more valuable than the other NP - Rila and Pirin? Or what makes it more valuable than the Natural Parks, or than the other Natura 2000 sites?

Maybe the rivers in Tsentralen Balkan NP are more vulnerable than all the other, maybe not. Actually - the mere truth is that nobody here knows anything about the ecological flow, because there are no rules! Neither Bulgarian, nor European!

We have to stress here the point on another very important issue:

Regarding the diversion type HPP, it turns out that not only the ichthyofauna in the river section between the barrage and the turbine house is destroyed, sentenced to an agonizing death when the river dries up. 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 here are located in the trout zone, with those strong migrating instincts of the trout, drying up of rivers is causing irreparable damage to the fish population in a much wider zone of the entire river. 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 ecological flow determination is so important. It is also a matter of discussion whether it should be increased in the spawning period of migratory river habitants. Yet there is not a single word about the "ecological flow" determination in the Guide?

The same is applicable to the absence of recommendations concerning the ways to measure the same ecological 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 too.

Then, since the ecological flow is most vital for the ecosystems' survival, as it is written in all those documents so many times, with the "Good Practice Guide" in view included - what "good practices" if any, are you all talking about, please? Do you really believe yourselves?

If all of you forgot the flow, displayed in all those videos above - then watch them again and again and again... until you understand our point!

The document reflects the view of the European Commission services and is not of a binding nature... thankfully.

C. 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 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 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 somewhere 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. This is applicable even to the ICPDR guide on fish passes, which is mentioned in the Good Practice Guide.

We therefore find that the Good practice Guide had to recommend the real good solutions. It must have started with the following good definition - a **Fish pass is a bioengineering structure integrated in migration barriers in rivers, for which it's proven by an independent monitoring, that all migrating aquatic species can enter in and at least 80% of them can reach the exit**. Note - the percentage is a matter of discussion, but the other things are not.

In Bulgaria we have thousands of river barriers. Hundreds of them have something like a fish pass - at least that's what they are called. Yet no more than 10/ten/ of them are fit for the purpose. Ten pieces that is, not 10%!

As for the downstream migration - the Guide says a few words again.

Fish friendly turbines - we are positive that the scientific data is not sufficient at the moment. Several existing studies display experiments, when the fish /dead or living/ is forced into such turbines /Archimedes screw - single or double/ and afterwards the death rate or the injuries are studied. But that is not the point. The point is - will a wild fish ever enter such a turbine? For the trout we know the answer - not a single wild trout will enter a rotating turbine, if it is not artificially forced into the turbine. We have watched them staying so many times in artificial ponds, never reaching the catchment grate - when they get near the grate and feel the flow, they always run away. Which raises another question we have read nothing in the Guide about - should the water speed at the catchment grates be limited or not, depending on the fish?

Fish screens 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 again, because when it is too high - then the fish can't get away and the screen turns into a trap.

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.

There is however a statement at the bottom line of page 40 of the Guide, concerning the facilities that produce repulsive or attractive stimulus for fish, we totally agree with:

However, in Europe majority of these technologies has not proven efficient yet.

Then it's obvious that the most significant recommendation in any Good Practice Guide must be - there is a binding need for further exploration on the fish migration problems and solutions, prior to increase the river fragmentation by building new migration barriers of any kind.

The Good Practice Guide of the European Commission services, however, is not of a binding nature...

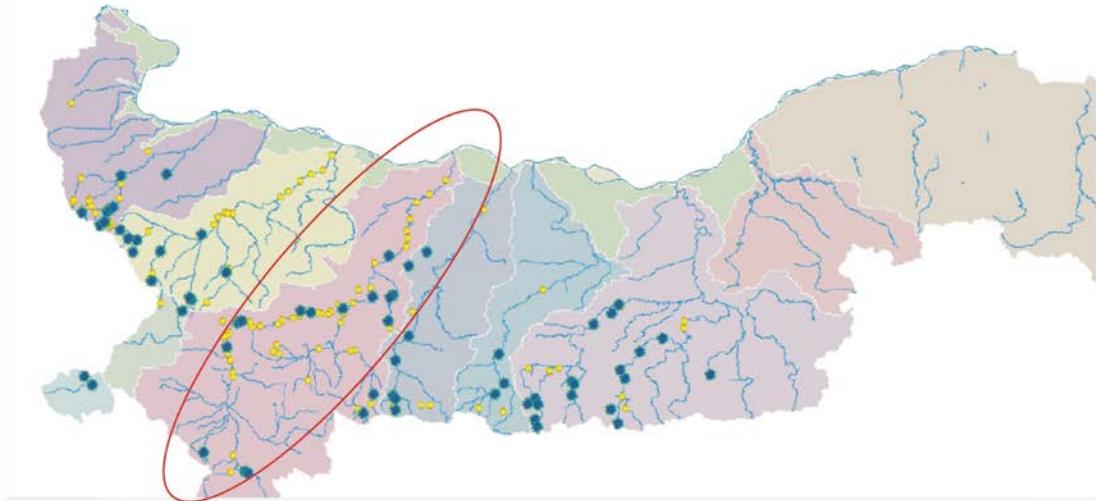
Yet there are many other cases in which a fish pass cannot be counted as a mitigation measure, for example at the big dams. There is no sense in spending money to move a fish from a river into a big dam, because it hardly will survive. If there is a natural migration barrier near to a future artificial one, there is no sense again. 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.

This is applicable even to the ICPDR guide on fish passes, which is mentioned in the Good Practice Guide. One major reason for that - all those documents deal with how to design a fish pass. They don't deal with the cases, in which a fish pass is not appropriate to build and what do we have to do in these cases. From this point of view, in the following section D. we will discuss another very interesting case

D. Cumulative effects.

In the course of studying the new RBMP 2016-2020 of the Danube region, we discovered a new map, displaying all operational at present and future HPP along the Iskar River:

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 follow and enlarge, 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 people of BDDR, who have issued those permits in the past - they obviously have no hearts, let alone the infringements of the law and the EU Directives committed. The same will be applicable to the present BDDR staff, if they keep extending and/or modifying the same water permits.

The first conclusion to be made is that it's obviously too late for any Guide, no matter good, or bad, or best, or perfect, or whatever.

The second - here is another case in which fish passes are not a mitigation measure. There is no sense in moving river fish from one lake to another - thirty five times, one after the other.

The third - 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? We will display briefly the case of the Sreden Iskar cascade:

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 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/Natura%202000/DOSV/kaskada_I_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-Svajen-Opletyna... just to increase the section of the river where it will not be running free.

Quite an interesting document, the above is. On page 110 it says that **cumulative effect was not studied**, because the overall future number of HPP at the entire Iskar River exceeds **35**. Since the experts didn't have full information for all those 35 HPP, that is the explanation why they didn't even study the cumulative effect of the nine HPP of the Sreden Iskar cascade, although they must have had full information for them.

On page 111 the experts recommend some not specified distance between the new HPPs, in order to let the river run free in between, while it is explicitly written in the description that those same HPP are in a cascade connection... It is also interesting that the investment plan is called "Cascade" in the report, while at the same time - the year of 2011, cascades were already prohibited by the Water Act.

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 OK.

This is how cumulative effects are taken into consideration in Bulgaria, as far as biodiversity is concerned.

Needless to say that there will be unsolvable problems with the sediment downriver transportation. In this respect, the Guide however shares a good practice example from Switzerland with us. The first phase of the project - *establishing the organization of the PGG and preparing the Master Plan*, took **6 /six/ years** to be accomplished??? Since we believe that the problem at the Iskar River will continue to be unsolvable, we hope that the EC services will share some results from Switzerland, if and when they happen to occur. If it took them **6 /six/ years** to prepare the Master Plan, we wonder how many decades will it take, for the plan's implementation? To our opinion - preparing plans of any kind for such a problem is a sign of good will only and for money spent as well. When those plans' implementation proves some positive results, then the efforts turn into a good example. Never earlier than that!

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?

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...

Pitifully the situation with the cumulative effects is not any different in all strategic documents at national level, such as the Appropriate Assessments of the new RBMP 2016-2021 for all the river basins in Bulgaria. The hydromorphological pressure maps of the Rila, Pirin, Vitosha, Yadenitsa and many other Natura 2000 habitats directive sites do not display the existing water catchments belonging to the National Electric Company - NEK, as if they don't exist. There are hundreds and hundreds of them and not a single one was taken into consideration. And not a word about the Iskar River case again in the AA of the plans.

The most brutal case is the future Yadenitsa dam case. There are 19 /nineteen/ existing water catchments at the very small Yadenitsa River and all its tributaries. There are two future SHPP along the river to be built, and there will be a big future dam that is going to be co-financed by the EU, and not a word about any cumulative effects in the East Aegean RBMP, and not a word in the Appropriate Assessment of the plan.

Now, the Good Practice Guide we are discussing here says a few words about cumulative effects and holds a few recommendations al right. It even says a few words about "*decommissioning of inefficient or obsolete installations*", as well as "*This may require, if appropriate, bringing the negative impact to an end either by stopping the activity or by taking mitigating measures*" - this one is on page 43, but the meaning of the words *"if appropriate"* remains unclear, which is a pity.

But, if all those future HPP at the Iskar River are built one happy day /which can happen tomorrow/ and a massive flood comes along - what shall we do? Shall we remove them all, or one half, or any other part? Based on what criteria shall we choose the ones to be removed? They are all brand new. i.e. - not old and obsolete, remember!

Cases like the described, with too many water permits for future HPP issued and what to do now in these cases are omitted in the Guide in view, although the map of hydropower on the Balkans is displayed - we have submitted the data for Bulgaria to Mr. Ulrich Schwarz from Euronatur, hence the data is correct. And the omission is accidental - obviously or not, but a pity. The loss however is not so big, because:

... the Guide is not of a binding nature anyway.

E. SEA, AA and EIA

Some of the problems concerning such strategic documents were mentioned briefly in the previous section - about how the cumulative effects are taken into consideration. We will stress the point here on two other major problems:

First - all the assessments here are paid by the future investor.

It should be noted that in Bulgaria there are different kinds of EIA and AA experts. The majority of them refuse to disregard the environmental protection rules and the legal framework. The others are ready to prove everything they are getting paid for. They are ready to write whatever the investors and the state authorities are willing to read and nothing else, otherwise they will not get paid - this has also happened once or twice. Now it's easy to guess amongst which of the groups the authors of all EIA and AA reports come and what are the results.

There is not a single environmental assessment that has proven the project's implementation harmful enough to any kind of ecosystem, to be rejected by the state authorities. Not a single one!

The only exception can be found in the SEA and the AA of the RBMP 2010-2015, which were fine. Here is what they say:

"...all types of HPP construction (run-of-river and diversion) produce extremely negative impact on protected areas when more than 20 to 30% of the average river water quantity is taken, that is why they shouldn't be allowed."

Yet some of the same authors took part in the SEA and the AA of the new RBMP 2016-2021 and have seemingly forgotten what they wrote in the previous assessments.

Second - in all AA reports we have explored, concerning HPP projects implications on Natura 2000 habitats directive sites, it's written that the river will be "slightly damaged" /which is an euphemism for destroyed/, but the affected area will be less than 1% or 0.5%, or any other small percentage of the total area of the site, no matter that the river may host priority habitat types and priority species.

Now, do the river habitats and species care for any big or small percentage, if their home will be destroyed? And the nonsense, as it is, is confidently used as an excuse by pronounced scientists to overcome the feel of guilt, if any pieces of the feeling are still alive, that is.

If any percentage should be taken into consideration - it should compare the affected area to the entire area of the river habitat, not to the entire area of the site

These are the ways all EIA and AA are prepared in Bulgaria. They always prove that everything will be OK, and are always willingly accepted by RIEW or MOEW, with no exception.

The Good Practice Guide again comments such problems, but it is not of a binding nature, so let's forget about it.

F. The control on hydropower.

There isn't such a thing in our country - we have lodged four consecutive Complaints with GD Environment to prove the statement. The controlling RBDs are not equipped, the staff is insufficient, the operators are too powerful to touch, the legal framework - not appropriate and so on, and so on. If there was any sign of such control - those videos at the beginning, and all the pictures here as well, wouldn't have been possible. For detailed information anyone can read the four Complaints.

We will stress the point here on one major problem only:

According to Article 200 (1) of the Water Act - the infringements /when caught/ are subject to penalties as follows:

1. He who uses waters without a legal right or in violation of the water permit provisions or contract:

.....
B) Within a water quantity of 10 l/sec up to 100 l/sec - is subject to a fine of 500EUR up to 5000EUR

Г) For a water quantity bigger than 100 l/sec - is subject to a fine of 5000EUR up to 12500EUR

Note - obviously the smaller fines are used for the first time of the infringement being caught.

2. He who uses water bodies, aquatic facilities and systems, or builds such, without a legal right or in violation of the water permit - is subject to a fine of 500EUR up to 5000EUR

These penalties are so small, that they are not worth even the efforts of the controlling RBDs. Especially in comparison to the operator's profit and mostly - to the damage caused. **See article 23 of the WFD, which says:**

- **Article 23**

- **Penalties**
- **Member States shall determine penalties applicable to breaches of the national provisions adopted pursuant to this Directive. The penalties thus provided for shall be effective, proportionate and dissuasive.**

We therefore find that any Good Practice Guide must hold recommendations about the meaning of the words "effective, proportionate and dissuasive", because they are the only barrier that can force dishonest operators to give up killing rivers. **And this is a matter of an utmost importance!**

The Good Practice Guide, however, does not comment such matters either, but it is not of a binding nature, after all.

Another problem is that there is a slight difference between taking away 100 l/sec from a river that is running with 100 l/sec and taking them away from a river that runs with 1000 l/sec. The first river will be killed, while the second one will hardly feel the theft.

G. The existing water permits

We have too many actual permits in our country. The number of operational HPP is 258-260 at the moment. At least another 250 have all the necessary water permits and can proceed with the construction when they wish. Yet another 400-500 spots along the rivers are identified as suitable for Hydropower and reserved by future operators - the exact number is unknown. **The majority of spots are located in Natura 2000 habitats and birds directive sites.** The Iskar River is a good example, but it is not the only one. The situation isn't any better in the East Aegean River basin and is much worse in the West Aegean River basin, where the spots are just a bit more scattered, but the overall number is immense. **Actually - if all those plans are implemented one happy day - there will be no river running free around here.**

According to our monitoring - no more than **8%** of the existing HPP are following the legal regulations to some extent. And the regulations are far from perfect - for detailed information anyone can check the four complaints.

That is why we think that, due to the absence of many strategic documents and of any reasonable National Standards for hydrotechnical design and construction of hydropower plants - a temporary Moratorium on any further HPP approval procedures including construction permits for new HPP is essential - until those Standards are prepared and introduced. Thus all existing-, but not implemented yet, or future projects shall be brought into conformity with these Standards and only then shall be approved for further development.

We also believe that prior to the preparation and implementation of National standards - a nationwide programme for ecological impact assessment of all existing HPP should be carried out - to get a clear picture of all the benefits and damage they produce, in order to draw the necessary conclusions for the future. We have seen so many mistakes in the existing HPP - that must not be multiplied in the future 700 HPP, by any means!

Moreover - we have every reason to believe that the results of a monitoring programme will show a devastating impact caused to the river ecosystems by the existing HPP. Then - shall we proceed?

Of course, the Good Practice Guide says not a word about assessing the impact of all existing HPP on Nature, before we keep destroying river after river. The Guide has other purposes, of course. But hey - why do we keep forgetting that **it was not of a binding nature, was it?**

H. The Good Practice guide

"**We /the EC/ welcome hydropower in Natura 2000 sites. There are some good practices which you may follow if you wish, but they are not of binding nature, so don't you worry too much**" - that's what the Guide is telling every hydropower operator and our state.

We /Balkanka Association/, on the other hand, find the above message absolutely wrong.

As for the Good Practice Guide itself - we find the recommendations suitable to some extent /depending only on the results of a national monitoring programme/ for non protected areas, rather than in Natura 2000 habitats and birds directive sites - especially in those, designated for the protection of river habitats and species. The main reasons are exposed in the previous sections, but there are many other details to consider. Just one more example - this year a Natura 2000 habitats directive site **Bilernitsite BG0000593** was killed, because the Luna HPP discharged thousands of cubic meters toxic silt into the river. It is the worst eco catastrophe in modern history - that's what the minister of environment and water said. Still, the Good Practice Guide says not a word on how to deal with such a problem, when it happens.

The driving force of such a document 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.

We have some bad news for the European Commission and for all those hydropower companies that have inspired the so called Good Practice Guide - **hydropower is a dirty word around here now**, in Bulgaria it definitely is.

Moreover - if the existing HPP operators keep doing what they do, if the administration /National and European/ keeps not doing what it is supposed to, and we keep showing to the public the results - **hydrotechnics will become a dirty word**, if that has not already happened either. And we refuse to take the blame for it - we are only showing to the public what they do and what they don't!

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, the 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 - this year the University of Architecture, Construction and Geodesy has only **1 /one/** new student in hydrotechnics, due to its devastating fame. Only one new student in the entire country!

As for the rating of MOEW - let's no talk about it! Poor thing, may it rest in peace.

And what about the rating of EC DG Environment after no reaction to four consecutive complaints, spending time and EU taxpayers' money /including ours/ on documents like The Guide in view instead? We prefer not to discuss it here but, rather, in the next consecutive complaint.

Getting back to the Guide - the Good Practices in view present a replica of the legal framework, available in our country - nothing more and nothing less. Water catchments equipped with proper fish passes to provide for the migration of the fish, AA and/or EIA to be carried out if necessary, cumulative effects to take into consideration, other mitigation measures - all of that is old news. Indeed, within the Guide the *hydropeaking* effect is mentioned briefly once or twice, but only as a fact, with no mandatory recommendations, concerning the reduction of its negative impact. Besides this added value - there is nothing that is not well known around here by the state administration.

BUT, as far as we can understand - our legal framework is mandatory to follow, never mind that no one does it, by the way. And the same rules, as they are described in the Guide - are *not of a binding nature* - what is the meaning of the message? Does the European Commission tell us, that they are mandatory no more, depending only on someone's good will to follow, even in Natura 2000 sites? We have a problem then, since all the hydropower operators and the state will understand the message only this way.

In this respect, the Good Practice Guide 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 of a binding nature, and is still promoting the investment hydropower plan? Only one key difference that we can see - unlike the AA here, the Guide is paid by the EU taxpayers, not by the investors, is it not?

I. River restoration

Now river restoration really needs a Good Practice Guide in order to achieve the objectives of the WFD to attain good status/potential of the surface water bodies. We are well aware that, instead of building new migration barriers of any kind, many European countries are making efforts to reduce the river fragmentation, but in Bulgaria we don't do anything like that. The poorest European member state is rich enough to build those stupid costly fish passes shown above and when we insist on the removal of one single river barrier - the state authorities always say - there is no money for such a crap!

It's also funny that those old European countries, so worried for the status of their own rivers now /when it is too late/, are trying to export their hydropower companies and offer them to us. Otherwise the Good Practice Guide on hydropower would not have been a fact. Actually, it holds a few recommendations on river restoration, but then again - *it was not of a binding nature, was it*.

We will make only two remarks referring the table of measures on page 32.

For the upstream continuity for fish - Stock from hatchery is not a mitigation measure. It simply is... a stock from hatchery - we are experts in the field, but have to write some 30 pages more to prove it.

The table doesn't say a word about the "ecological flow' determination and measurement. The importance of this issue we have already clarified in the previous sections.

J. Hydropower and the public interest

We can endlessly elaborate on this one - if anyone is interested, it's best to read the four complaints again. 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 Good practice should we follow in such cases?

We will show only one case that happened this year - the deliberate killing of Natura 2000 habitats directive site **Bilernitsite BG0000593**, we mentioned briefly before:



At least ten 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 EC services must also have in mind that there is a very important social issue to be considered in any Good Practice Guide 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 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 the other cases MOEW has stopped the projects, knowing that if they hadn't, they would have lost the case again.

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 nearest future.

We therefore think that a Good Practical Advice for all the hydropower operators, on how to deal with local opposition, is essential. We strongly recommend for this one - *to be of a binding nature*, more or less.

We were also authorized by the above gathering of fishermen to deliver a message to the EC services and here it is:

"Dear friends from the EC services,

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

By the preferences hydropower is provided for, you have initially inspired the boom of it in our country, killed the life in so many rivers, where the damage caused is irreparable.

Now are you trying to promote a Good Practice Guide 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 country! Here you are not welcome anymore.

If you can't help it - tell the future hydropower operators in our country to check as thorough as they can for every case the legal viability and tell them not to pay for inappropriate Appropriate Assessments, before they try to kill a single river here again. Otherwise we'll meet in court, every time they try to kill the next!

Here is the Best Practical Advice that WE can give you all:

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
26.12.2016


/dipl.eng.Dimiter Koumanov/
