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

STATEMENT of EXEMPTION for Bulgaria

Bulgaria is far ahead in front of the rest of Balkan states in both small and large scale hydropower development. Four big and about a dozen small old cascades with derivation channels from socialist times are operating with at least 500 water catchments on small rivers and streams, located mainly within the boundaries of Natura 2000 Habitats Directive sites and even in the National parks. About 70 old and 170 new individual small HPPs are in operation nowadays too - the new projects were approved and built during the last 15 years.
Due to the huge hydro morphological pressure and the devastating impact on the environment, any further hydro development in Natura 2000 Habitats Directive sites is prohibited in the BG Water Act since 2010.
As the construction of SHPs continues, ongoing destruction has become fact: dried river beds, non-functional fish passages, destroyed riparian vegetation, etc. This is happening in Natura 2000 sites and beyond, disregarding the EU laws and with the knowledge of the national authorities which are continuously informed by Balkanka Association about the hydropower impacts in weekly reports.
The online HPP monitoring platform http://dams.reki.bg contains a great number of evidences of the grim reality that goes with the operational SHPs – just a few of those plants comply to some extent with the existing legal framework. From more than 170 SHPs visited and checked, only 6 of those plants were releasing ecological flow and have somewhat suitable fish passes.

Thus vast negative experience has been gained, proving the following problematic issues:

1. Insufficient National and European legislation.
The legal framework concerning hydropower is insufficient and there are no rules of legal force for many of the problematic issues both at National and European level. For example - in Bulgaria and in the EU there is no common Ordinance on the design and maintenance of Fish Passes, there is no common National or European Methodology for the residual flow /some incorrectly call it E-flow/ determination and measurement etc. There are no legal rules for general design of hydropower dams and plants too. At EU level some guidelines exist, but they are holding only good intentions with no mandatory specific requirements. For example: in Bulgaria the E-flow cannot be even measured both by the developers and by the controlling state authorities. In the existing European guide on E-flows there is not a word about this problem too. That is why the affected rivers in BG stay dry during prolonged low water periods and the state is deliberately doing nothing to improve the situation, regardless of the fact that even the National Chamber of Engineers in the Investment Design has confirmed the same problematic issues, namely the deficiencies and gaps in the legal framework, in the following letter to the state authorities:
https://dams.reki.bg/uploads/Docs/Files/KIIP_Letter.pdf

The reason for the letter is that decent hydropower professional designers suffer from the lack of relevant legal framework which is in favor of only a few irresponsible individuals

who prefer to follow no rules of good practice which would be mandatory otherwise they will find no projects to design at all and will be thrown out of the market.

In 2015 the described chaos in the regulatory legal framework was confirmed even by high ranked state officials in the following letter of formal notice, released by Pavel Gudjerov - deputy minister of environment and waters at the time, pointing out the problems as they are described here:
https://dams.reki.bg/uploads/Docs/Files/DOCUMENT_013_MOEW.pdf

Some short and long term actions of crucial necessity were discussed or even proposed in the letter, yet again there was no further action taken by the state authorities to improve the situation at all. The reason is that there is rampant corruption and too many powerful people involved in all hydropower activities in the country. Therefore the above letter resulted only in the release from duty of the deputy minister a few months later.

2. Inappropriate implementation of the existing legal regulations
Notwithstanding the fact that the legal framework is insufficient to meet the challenge of protecting biodiversity along the rivers from dishonest hydropower operators who are focused only to increase their profit, even the existing regulations are not followed in Bulgaria at all. This led to several complaints lodged with DG ENV of the EC. In 2015 WWF Bulgaria and Balkanka Association lodged two separate complaints on the issue showing the dead dry rivers and the gaps in the implementation of the legal framework. These complaints were supported by many other environmental NGOs, anglers' and kayaking associations. The first complaint of Balkanka Association can be found here:
https://dams.reki.bg/uploads/Docs/Files/EU_COMPLAINT.pdf
Since then, 8 /eight/ supplements were conveyed to DG ENV by Balkanka Association in the form of appendixes to the first original complaint displaying new and new evidence on numerous infringements.
Formal letter of support was sent to DG ENV even by the National Museum of Natural Science at the Bulgarian Academy of Sciences, stating that the facts and problems addressed in the complaints are true. This letter of support can be found in the following link:
https://dams.reki.bg/uploads/Docs/Files/DOCUMENT%20No3%20STATEMENNT%20NAT_MUSEUM%20BAS%20.pdf

3. Inappropriate level of impact assessment
The problem is huge. So huge, that the European Commission has just opened an infringement procedure by sending a letter of formal notice to Bulgaria over systematic failings in the implementation of EU nature legislation. The news about it can be found here:
http://europa.eu/rapid/press-release_MEMO-18-4486_en.htm

All the complaints lodged with DG ENV in the last three years are based on proven breach of the EU law during the authorization process of the operational and future hydro projects, approved in the last 15 years. Within the infringement procedure of the European Commission Bulgaria will be forced to terminate the bad practice of uncontrolled HPP authorization without due diligence of the environmental and social impact and the illegal projects breaching EU law will have to be decommissioned as always.

3. Horizontal problems need horizontal solution.
Since there are too many appropriate specific rules of legal force missing, while the existing rules are not followed and most of the hydropower impact assessments are false, a nationwide programme for ecological impact assessment of all existing HPPs in operation should be carried out to get a clear picture of all the benefits and damage they

have produced already, in order to draw the necessary conclusions for the future. Bulgaria should learn from the mistakes before future hydropower is developed any further.
The damage is quite clear - anyone can see it in hundreds of pictures and videos by exploring the BG hydropower monitoring platform:
https://dams.reki.bg/Dams/Map?setlang=en

With more than 250 operational HPPs at the moment and another at least 300 actual Water Permits in the pipeline, Bulgaria is a clear example of the adverse effects of small hydro on riverine ecosystems and fish populations. Having a very specific annual river runoff (clear short peaks and prolonged drop downs in the rest of the time), together with the idea to construct HPPs that will run only a few months and will suck up all the water during the rest of the year, the country demonstrates the future of hydro on the Balkans as a whole with the advent of climate change which will only increase the runoff irregularity in the region.

The benefits are questionable to say the least. Small hydro in Bulgaria adds about **2%** to the total energy production mix per year, but that is because the requirements on the residual flow are not followed at all. Due to the big irregularity of the river runoff in Bulgaria and if the requirements on the residual flow are followed, the hydropower plants should not be working at least half of the time throughout the year and then the contribution of small hydro to the energy production mix will be less than **1%** on an annual basis. As it was mentioned already, the problem with the runoff will increase with climate change and **the best of spots for small hydro have already been occupied**...
Every next small hydro will lead only to a small benefit to the developer for the unacceptable price to local communities - their dead river, together with a nonexistent contribution to the energy production mix.

Therefore the need of a temporary Moratorium on hydropower development followed by a nationwide impact assessment programme is undisputable. It was supported in a letter by the Department of "General and Applied Hydrobiology" at the Faculty of Biology of the Sofia University "St. Kiment Ohridsky" to the Ministry of Environment and Waters and to the Parliament. This letter can be found in the following link:
https://dams.reki.bg/uploads/Docs/Files/STATEMENT_FACULTY_OF_BIOLOGY.pdf

4. The Master Plan for hydropower *No Go Zones* in Bulgaria

It is too late for the implementation of the Master Plan in Bulgaria already. This would have been a perfect approach in 2005, not today. Back then many of the river biodiversity hotspots with high conservation value could have been saved from destruction by introducing the *No Go Zones*. However, nowadays it is not only the habitats hosting endangered species of high conservation value that were lost - we have problems to safeguard even the appropriate river stretches for the reproduction of the commercially important fish species like the European Catfish, Carp, Trout etc. It is scientifically proven that wild Carp is actually no longer existent under natural conditions in BG Rivers. In the West Aegean River Basin Management Plan 2016-2021 there are no protection zones for this kind of fish species designated at all, although the determination of such zones is mandatory according to the Water Act.
This means that in Bulgaria not only the river stretches of high biodiversity conservation value are at risk due to the huge hydro development, but all the rest of Rivers that are inhabited by the named important species. Even the preservation of the national genetic fund of these fish species is at a risk these days due to the lack of proper conditions for their natural reproduction. This genetic fund cannot be preserved under artificial conditions only in the fisheries or in the scientific institutes because poor human efforts cannot replace nature's effectiveness and the huge loss of spots for natural genetic exchange will

inevitably lead to degradation of the populations and small hydropower is not worth that loss.

Moreover - at least 80% of the present hydro units in operation fall within the current *No Go Zones* as they are defined in the Master Plan. The biodiversity loss is huge - it was confirmed in the Appropriate Assessment /AA/ of the RBMPs 2010-2015. Back in 2009 with only 142 operational SHPs at the time the Appropriate Assessment of the first RBMP concluded that there is an adverse cumulative effect from the construction of SHPs and hydropower should not be allowed in Natura 2000 sites and some crucial restrictive measures were included in those plans as well, but the state authorities failed again to implement these measures afterwards.
Here is just a short citation:

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

See 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/

It should be underlined that the AA reports for the first RBMPs were introduced in the end of 2009 when the hydropower pressure was half as big as it is today and the state has done nothing to follow the AA recommendations. On the contrary, too many new projects were authorized, built and set into operation.
Yet the problem is not only in dry riverbeds or inappropriate fish passes. In the last two years we also have two new cases of proven full destruction of Natura 2000 Habitats Directive sites designated for the protection of priority river habitats and species - **Bilernitsite BG0000593** and **Zemen BG0001012**.

Here is what happened in the **Bilernitsite BG0000593** site when an HPP discharged thousands of cubic meters toxic silt into the river, "sustainably" accumulated in the lake for about three years of operation - just watch the pictures and the videos uploaded here:
https://dams.reki.bg/0161-dam/2016-09-21

And here is the final environmental impact report of the National Museum of Natural Sciences on the destruction of the **Zemen BG0001012** site, caused by a new small hydro installed at an existing old dam from socialist times, full of toxic silt:
https://dams.reki.bg/uploads/Docs/Files/Pchelina-Struma%20FINAL.pdf

Then, as the devastating impacts are proven in the cases that were recently checked, as well as in many other scientific research studies and recommendations and even in the AA for the RBMPs, a nationwide hydropower impact assessment programme must be carried out to get a clear picture of the overall hydropower impact. After the implementation of the programme, additional restrictions in the actual Water Permits as well as substitutive or compensatory measures must be introduced to reduce or mitigate the negative impacts discovered. Decommissioning of the most harmful plants must also take place obviously, followed by River restoration measures, instead of any further hydropower development. Like it or not, this will also happen under the infringement procedure the European Commission has just started.
The first step, however, should be the suspension of any further hydropower authorization until the results of the assessment programme become available and the necessary conclusions are drawn. Lessons should be learned on time otherwise the same mistakes will be multiplied over and over again. That is why the entire territory of Bulgaria should be considered a Hydropower *No Go Zone* today.

Finally, in Bulgaria we have our huge negative experience with hydropower devastating impacts on the chances for local development based on all related ecosystem services Rivers can provide for, such as all kind of river related or rural tourism, water sports, angling, hunting, agriculture, livestock breeding etc. Local people are now pretty well aware what is coming their way when they hear that a new hydro will be placed on their local River, just because they have already witnessed the damage in the neighboring villages and Rivers. Therefore people fight hard as they can against hydropower which is a dirty word around here nowadays.
While the Master Plan is focused only on environmental criteria, local opposition should always be taken into consideration in the hydro development plans, in Bulgaria people are having enough of that already and will always fight.

SUMMARY AND CONCLUSION

We have so many Rivers killed here in BG for the sake of hydropower in the last decade. Small hydro is worth about 1% of the overall electricity production mix per year if the legal requirements on the E-flow are followed and the best spots for hydropower, no matter big or small, are occupied already. Is it worth to kill the rest of the rivers that still remain intact for no more than the additional 0.5% of electricity production?

The most reputable scientific institutions have officially shared their concerns, stating that hydropower causes devastating impacts the way it is conducted in our country. The same statement is confirmed by the National Chamber of Engineers and in the Appropriate Assessment of the 2010-2015 RBMPs by different scientists as well. Even the EC has opened an infringement procedure against Bulgaria over the lack of proper assessments and many other infringements of the EU law concerning environmental protection in the Natura 2000 network.

Thus everybody is interested to see the results of the nationwide hydropower impact assessment programme in order to find the truth and not to repeat the same mistakes in the future.
But the Bulgarian authorities and the financial institutions of the EU are afraid to even think about such programme, with their heads buried in the sand, always talking those big words about how sustainable hydropower is, without a single proof for its sustainability. This is funny that some bureaucrats that have hardly seen a river running in the wild, let alone a hydro unit in operation, are talking us into the sustainability of hydropower sitting in their cozy cabinets, while at the same time a lot of respectful scientific institutions, professional organizations, environmental NGOs, river sportsmen, AA experts etc. officially confirm the opposite, namely that hydropower has nothing to do with sustainability the way it is conducted in our country.

Moreover, based on nine consecutive complaints Balkanka Association has lodged with DG ENV in the last three years, it is a proven fact that EU law concerning river protection was breached and Bulgaria will never meet the objectives laid down in EU Water Framework Directive. Having enough evidence on the matter DG ENV has started a Pilot application which will inevitably lead to another infringement procedure against Bulgaria. Here is the proof for the EU Pilot application:
https://dams.reki.bg/uploads/Docs/Files/Transfer%20to%20EUP%20-%20CHAP201502363%20-%20HPPs%20Balkanka.pdf

Therefore, further hydropower development is a real challenge nowadays - the rivers will be always there for us - why is the rush to kill them all right now? They are not going anywhere, are they!
In Bulgaria we have our numerous examples to study and to learn from - let's explore the impacts, face "sustainability" in the eyes and then informed we shall proceed on with the

same mistakes, or maybe we will not. We may even reconsider those high feed-in tariffs hydropower is rewarded with for being as "friendly" to environment as we will find it actually is.

Because the poor people of Bulgaria are the ones to pay the feed-in tariffs, while at the same time they are also paying with the destruction of their own rivers in front of their eyes, deprived from any hope for future local development based on related ecosystem services rivers can provide for, and in the end the same small people will pay the price of the infringement procedures when it comes to paying. This is the only sustainable thing that goes with hydropower hand in hand around here - everybody's paying for the pleasure of the hydro lobby. How much longer will it carry on like that?

Until the nationwide assessment programme is carried out, the only undisputed proof available is that hydropower is killing nature all along and too many of the BG Rivers have been destroyed already. We have two different infringement procedures coming - one for breach of the EU Habitats Directive and another one for breach of the EU WFD - thanks to the "sustainability" of hydropower, therefore the entire remaining territory of the country free of hydropower should be considered Hydropower *No Go Zone* and that is all there is!