
REGIONAL STRATEGY FOR SUSTAINABLE HYDROPOWER IN THE WESTERN BALKANS

Responses to Comments on the Final Report, Draft Principles for Sustainable Hydropower Development in the Western Balkans, and the Indicative List of Potential Projects for a Sustainable Development of Hydropower in the Western Balkans

December 2017 to 31 August 2018

1. Introduction

The purpose of this document is to provide an overview of the comments received until 31 August 2018 on the following documents:

- Final Report
- Draft Principles for Sustainable Hydropower Development in the Western Balkans
- Indicative List of Potential Projects for a Sustainable Development of Hydropower in the Western Balkans (and the associated draft project summary sheets), as published on www.wbif.eu in December 2017

In the light of the comments received, the following points need to be recalled:

A. Data

After a scoping phase of the Study project, an intensive data collection campaign has followed as well as the establishment of operational contacts with relevant institutions and organisations.

Data collection efforts continued until the first quarter of 2017, when the preparation of the background reports started at the same time with public consultations on the preliminary findings. As such, the Study outcomes/conclusions, are based on the data provided by key stakeholders up to the first quarter of 2017. Such outcomes/conclusions are thus dated, i.e. it reflects the information available at that point in time.

Gaps in data availability/the reliability of data provided by relevant institutions/organisations was identified as a risk since the Scoping Phase, However, this did not prevent the Study from articulating the current status of the sector, the institutional, legal, and technical challenges; gaps in relevant data are duly reflected in the Study's assessment of hydropower plants.

B. Methodology

The Multi-Criteria Analysis (MCA) tool has been discussed with stakeholders and agreed in October 2016. In addition, more details were provided in Podgorica, on 30-31 March 2017, and in Tirana, on 11-12 May 2017.

The MCA was not the only tool used in the development of the indicative list of projects but was complemented by an expert assessment of factors which could not be quantified by the MCA (see details in the Final Report and Background Report 8).

A preliminary screening excluded:

- a) projects already in construction;
- b) projects without a minimum dataset available
- c) projects below 10 MW capacity;
- d) less likely variants of a proposed project.

Based on this screening, 136 were selected out of more than 480 projects.

According to the MCA projects were then selected against four key indicators:

- Environmental (location of HPP candidate with respect to protected areas);
- Technical (contribution to generation adequacy);
- Technical Readiness (available technical documentation)
- Financial (specific investment per unit of electricity generated, €/GWh).

For HPP candidates that scored more than 60 points at that stage a further detailed assessment was done against 30 indicators classified into five criteria groups (Technical adequacy, Financial viability, Social viability, Environmental acceptability and Realisation readiness).

Candidates which scored 50 points and more, were designated as Group A, while the other candidates were designated as Group B.

More details on the meaning of these criteria as well as on their weight (e.g. environmental and social criteria amounted for 40% of total score) may be found in the Reports mentioned above.

Most importantly, the MCA was designed in light of (and not in spite of) the gaps in data availability and reliability and then proven to be a fact during the more detailed data collection phases.

In addition, the MCA took into account relevant guidelines, assessment methods and best practices (e.g. Guiding Principles for Sustainable Hydropower Development in the Danube Basin, Hydropower Sustainability Assessment Protocol, etc.).

C. Lists

The list of potential rehabilitation and greenfield projects, as presented in the Final Report, does not constitute a green light to their construction but only to their further exploration of the technical, financial and environmental feasibilities of each individual project in light of the sustainability principles outlined in the Final Report. Such studies should be undertaken in parallel with the further designation of Natura 2000 sites and no-go zones by WB6 governments.

D. Small hydropower

Small hydropower plants have been excluded from the scope of the study for the following reasons:

- Their contribution to the global energy production and security of supply, or to the renewable energy sources targets, is extremely limited.
- In parallel, their impacts on the environment are severe, as they create multiple interruptions in water flows and fish passages, increase habitat deterioration and require individual road access and grid connections.
- Most of these small hydropower plants were commissioned after 2005, using state-support schemes (mainly feed-in tariffs) and these are expected to be gradually phased out after 2020 (with possible exclusion regarding small installations). It is therefore quite likely that the private sector's interest in developing small hydropower plants will diminish accordingly.

E. Next steps

The Study conclusions on the inventories of hydropower plants are based on the data provided by key stakeholders up to the beginning of 2017. Such outcomes are still to be endorsed and will be subject to further discussion. Any further studies / assessments should be undertaken by the owners / developers of existing or future hydropower plants.

2. Comments and Responses

#	Sender	Contents	Response
1	MINISTRY OF MINING AND ENERGY, OFFICE FOR KOSOVO AND METOHIJA, PE EPS, MINISTRY OF ENVIRONMENT OF REPUBLIC OF SERBIA	<ul style="list-style-type: none"> • Final Report: <ul style="list-style-type: none"> ○ Proposed changes with regard to the wording used for Kosovo as well as on how the maps feature the border between SER & KOS; document sources used; ○ “Regarding hydrological data, the Study must specify for each participant, in particular, the availability of data in order to work on the improvement and in order to provide realistic ground for future potential projects.” • Indicative List: <ul style="list-style-type: none"> ○ Lisina (28.6MW) to be called a pumped storage plant instead of HPP. ○ To add on the rehabilitation list: HPP Bistrica (102 MW) & HPP Zvornik (96 MW) <ul style="list-style-type: none"> ▪ rehab works on HPP Djerdap 1 and in HPP Zvornik in progress (mechanical improvements). ○ To add on the greenfield list: HPP Potpec A4, HPP Djerdap 3, RHE Bistrica, Moravska and Ibarske HPP (no detailed reasons provided). • Draft Principles: “Established procedures should determine where to operate, identifying no-go areas and tailoring activities in all other areas to local biodiversity and ecosystem services values” + “UNEP Convention on the Conservation of Migratory Species of Wild Animals (Bonn on 23 June 1979) – Bonn Convention (Article 5 Paragraph 5h - elimination of, to the maximum extent possible, or compensation for activities and obstacles which hinder or impede migration.” 	<p>Comments gratefully acknowledged.</p> <p>On the Final Report:</p> <ul style="list-style-type: none"> • The references to Western Balkans 6 (WB6) beneficiaries are in line with those established by the UN and in force within the EU, who is the Client for the Study. • The Final Report (as well as the background reports) reflect the data made available by relevant WB6 institutions/organisations. The purpose of the study was not to evaluate the availability of hydrological data in detail. However, Annex 1 to the Final Report identifies a series of measures which should be considered for implementation by beneficiaries, with support from international donors and national resources. <p>On specific hydropower plants included in the draft list of projects: The indicative list of projects reflects the results of the assessment undertaken by the team on the basis of data provided by relevant institutions/organisations up to the first quarter of 2017. More details on the process (screening, MCA, expert assessment) and next steps can be found in the general response to comments. However, the following changes have been considered:</p> <ul style="list-style-type: none"> • Lisina has been included in Vlasina HPP system. <p>On the principles: Proposed revisions will be considered and included in the revised version of the Principles.</p>
2	WWF ADRIA	<ul style="list-style-type: none"> • Input information that went into this MCA matrix and scoring system remains consistently insufficient across all segments important to ensure environmental protection and social acceptance of development, • Stakeholder engagement throughout the entire process was insufficient to facilitate dialogue and lead to social acceptance of the results, including any potential development that may result from this exercise. • It is commendable to see that the report promotes the need to undertake rehabilitation of existing hydropower plants. However, it does so only from the perspective of technical upgrades that deal with renewing equipment, and completely ignores the need to undertake ‘environmental rehabilitation’ of existing hydropower plants. [...] While identification of technical upgrades is particular to each hydropower plant, this report should emphasize the need to incorporate environmental restoration as a mandatory set of rehabilitation measures. 	<p>Comments gratefully acknowledged. Please see general responses to comments.</p> <p>On the information available:</p> <ul style="list-style-type: none"> • As it may be noticed from the statistics available on the IRENA and/or Energy Community webpages, the renewable energy mix in the region has gradually diversified, to include wind and solar. • More details on the role of the WBIF (and hence EU in such developments) are provided in response#5 below. However, as indicated from the start of the Regional Strategy for Sustainable Hydropower in the Western Balkans assignment, this Study is not intended to provide an assessment of renewable energy resources which could be developed in the WB6. It has however intended to stress the need for the sustainable development of hydropower

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			<p>resources in the region in the face of continuing investments in this sub-sector. It has done so based on the data made available by institutions and organisations throughout the region, including environmental NGOs; the Study has acknowledged the lack of data and proposed a list of measures (see Annex 1 to the Final Report). The outputs to date thus represent one step in the further development of this sub-sector with a view to full, future compliance with the EU Acquis, i.e. it will have to be followed by further actions and planning, several of which refer to adequate data collection and monitoring and appropriate studies and consultation processes.</p> <p>On stakeholder engagement: Please see details above on consultations undertaken to date.</p> <p>On rehabilitation: The Final Report (as well as relevant background reports) emphasizes the need for environmental restoration measures as part of the rehabilitation process (see chapter 14.1.5).</p> <p>In addition, in its policy dialogue with all Western Balkan partners, the European Commission continuously emphasises the need by countries to calibrate their investments in hydropower generation, in order to achieve the right balance between diversification and security of energy supply an emphasis on renewables, and nature protection. This is done, in particular, in the framework of the Stabilisation and Association agreements and within the Energy Community. We have also made clear that the European Commission will provide technical assistance for project preparation in full compliance with the acquis.</p> <p>For candidate countries and potential candidates, the EU energy and environmental acquis, independently of its transposition status in the region, remains the reference for hydropower development. The EU renewables directive notably states that the assessment, planning or licensing procedures for renewable energy installations should take all Union environmental legislation into account. The European Commission also recently adopted guidance on the requirements for hydropower in relation to EU Nature legislation and the Water Framework Directive. It is based on EU Member States' experience and good practices of other stakeholders, including private sector and civil society. This guidance is an important tool that we promote to ensure that hydropower is developed in compliance with the highest standards of ecological preservation.</p>
3	MINISTRY OF ECONOMY OF MONTENEGRO	<ul style="list-style-type: none"> Reiterate the need to include HPP Donje Krusevo on the greenfield list and HPP Perucica and HPP Piva on the rehabilitation list (which they detailed in a separate letter sent on 19.01.2018) 	Comments gratefully acknowledged.

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		<ul style="list-style-type: none"> • Comments & detailed data provided on the summary sheets for MNE, including statements on SEA & EIA to have been carried out for the HPPs included on the shortlist + “protected areas are not adopted by the Gov of MNE” to be revised. 	<ul style="list-style-type: none"> • On specific hydropower plants included in the draft list of projects: The indicative list of projects reflects the results of the assessment undertaken by the team on the basis of data provided by relevant institutions/organisations up to the first quarter of 2017. More details on the process (screening, MCA, expert assessment) and next steps can be found in the general response to comments.
4	MINISTRY OF ECONOMY OF MONTENEGRO	<ul style="list-style-type: none"> • Comments on the Final Report: <ul style="list-style-type: none"> ○ Complaints that their previous comments have not been reflected in the Background Reports + Final Report PLUS they did not receive any feedback to their comments. ○ “the Regional Strategy for Sustainable Hydropower in the Western Balkans is not a strategy of the region, but rather a strategy that represents the collection of strategies of individual countries. No hydropower plant that Montenegro could build with neighbouring countries has been considered (except for the HPP Donje Kruševo), although each of the joint facilities that could be built on the Drina (Piva and Tara), Čehotina and Lim are better than the proposed ones, which are closed within the boundaries of states (e.g. HPP Buk Bijela “large” is a better facility than HPP Buk Bijela “small” and HPP Donje Kruševo).” ○ “The Multi-Criteria Assessment (MCA) methodology was developed as if to prevent the construction of hydropower plants [...]by putting first environmental protection issues and preserving the existing environmental status.” ○ “Protected areas are only those areas that are recognised as such by the Government or local government, and defined in their official documents as protected.” ○ “When covering impacts on people, the consultant should have dedicated to them at least as much attention, importance and room as he had devoted to fish.” ○ “The document did not adequately cover and evaluate the cascading operation of hydropower plants.” ○ “Due to this methodology, very high-quality hydropower plants have been eliminated from the recommended projects list, even from the reasonably good projects list, for example, HPP Donje Kruševo. The document does not include plans to construct the best hydro power plant in the region HPP Buk Bijela “large” (reservoir level 500 m.a.s.l.), but only HPP Buk Bijela “small” (reservoir level 434 m.a.s.l.), which means that hydroenergy potential between HPP Piva and small HPP Buk Bijela remains unused.” 	<p>Comments gratefully acknowledged.</p> <p>Feedback on previous comments has been provided during the bilateral meeting of 29 July 2018.</p> <p>On specific hydropower plants included in the draft list of projects: The indicative list of projects reflects the results of the assessment undertaken by the team on the basis of data provided by relevant institutions/organisations up to the first quarter of 2017. More details on the process (screening, MCA, expert assessment) and next steps can be found in the general response to comments.</p> <p>On MCA: The MCA Methodology was developed following the guidance set in ToR, and best practices in MCA application, whereby considering the EU legal requirements and practices, as well as regional context in respect to national legislation, environmental baseline data availability and HPP data provided for the assessment. Specifically, in MCA Level 1 the Environmental indicator - Location of HPP candidate in respect to protected areas - had a weight factor of 0.4. In the MCA Level 2, the Environmental criteria group represents 0.25, and the Social criteria group 0.15 from the total MCA Level 2 score. Thus, jointly, the Environmental and Social criteria weight in MCA Level 2 is 0.4. More details on the overall assessment process have been provided in Section 1 above.</p> <p>On protected areas: According to the Law on Nature Protection (Official Gazette of Montenegro, no. 54/16) Protected Natural Assets encompass two groups of ecologically important / significant natural areas (article 20), as follows:</p> <ul style="list-style-type: none"> (i) Protected Areas (hereinafter PAs) that include following (national) categories: strict nature reserve, national park, special nature reserve, nature park, monument of the nature and areas of exceptional (natural) values (ii) Ecological Network (Natura 2000) sites (not established, so far)

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		<ul style="list-style-type: none"> ○ “There is no proposal in the document even for the study of the basins of the Ćehotina and Ibar.” ○ Proposal to include HPP Perućica and HPP Piva on the rehabilitation list. 	<p>Different categories are managed on different level state or regional/local. All protected areas must be managed in such a way that relevant features for which this area has been proclaimed are preserved.</p> <p>On top of that, all areas that are proposed for protection (e.g EMERALD) should be treated as if protection is already in place. These considerations have been taken into account in the MCA and reflected in the summary sheets (including maps).</p> <p>On cascading HPPs: The approach proposed could not be undertaken because of lack of data needed for this type of analysis. It is however one of the key recommendations of the report when it comes to further studies/best practices and it is reflected in the presentation of the indicative list of projects, which are grouped at the river (basin)/cascade level.</p> <p>On Ćehotina and Lim: Those locations are explicitly mentioned in follow-up work recommendation section of the Final Report (Annex 1)</p> <p>On HPP Perucica and HPP Piva: Please see response#3 above.</p>
5	FRIENDS OF THE EARTH BOSNIA AND HERZEGOVINA	<ul style="list-style-type: none"> ● General comments: <ul style="list-style-type: none"> ○ Against the development of new hydropower plants, particularly those that are small, on several counts, including the right of local communities to water resources. ○ In support of investments into wind and solar generation instead: Most hydropower plants with dams are likely much worse greenhouse-gas emitters than wind or solar power”[...] wind and solar is cheaper, faster and cleaner so imperative should be in opening space for investments in these technologies which have more possibilities for further improvement as a more sustainable and fast developing technology.” ○ “WBIF have to be driven by environmental, social and development goals and in that matters the solar and wind capacities should be strongly supported in the Western Balkan countries. On that way it is expected that balancing of different energy sources could be applied easily and without stranded investments. The high level of no transparency and corruption in Western Balkan countries, lack of capacities of authorities and low quality of environmental assessments opens space for unsustainable practices in hydropower development.” ● On the lists: <ul style="list-style-type: none"> ○ Agree on prioritizing investments in rehabilitation. 	<p>Comments gratefully acknowledged.</p> <p>In its policy dialogue with all Western Balkan partners, the European Commission continuously emphasises the need by countries to calibrate their investments in hydropower generation, in order to achieve the right balance between diversification and security of energy supply an emphasis on renewables, and nature protection. This is done, in particular, in the framework of the Stabilisation and Association agreements and within the Energy Community. We have also made clear that the European Commission will provide technical assistance for project preparation in full compliance with the acquis.</p> <p>For candidate countries and potential candidates, the EU energy and environmental acquis, independently of its transposition status in the region, remains the reference for hydropower development. The EU renewables directive notably states that the assessment, planning or licensing procedures for renewable energy installations should take all Union environmental legislation into account. The European Commission also recently adopted guidance on the requirements for hydropower in relation to EU Nature legislation and the Water Framework Directive. It is based on EU Member States’ experience and good practices of other stakeholders, including private sector and civil society. This guidance is an important tool that we promote to</p>

	<ul style="list-style-type: none"> ○ Against Glavatičevo and Bjelimići HPPs because these go against “the plan for establishment of new protected areas such as National Park Prenj-Čvrsnica-Čabulja and National Park Igman-Bjelašnica-Treskavica and Rakitnica Canyon.” ○ “Neretva is the last habitat of that quality for Softmouth trout (<i>Salmothymus obtusirostris oxyrhynchus</i>), Adriatic trout (<i>Salmo farioides</i>) and Marble trout (<i>Salmo marmoratus</i>) which are endemic and globally endangered fish species. One of the Greenfield projects proposed is planned in a village of Glavaticevo which is named after Marble trout (Glavatica, SBC languages). Beside biodiversity arguments, this area is under constant tourism development in last 15 years where the white-water rafting, canoeing, kayaking, fly-fishing, hiking and other tourism activities took place generating significant income for local community.” ○ Against Buk Bijela: “close to Montenegro border and National park Tara which is declared as UNESCO heritage. On the side of the Montenegro there is a strong opposition of the local communities and civil society organizations to this project. On the Bosnia and Herzegovina side there is National park Sutjeska which area extension was planned to be merged and connected with the Montenegro protected areas constituting transboundary protected area.” ○ HPP Paunci and Foča: “controversial from the aspect of land occupation and social impact related to dislodge of the local population. Both projects are planned in the area of large population density which will bring new issues for these projects” ○ “Drina River is one of the last habitats and the longest river where Huchen (<i>Huchohucho</i>) globally endangered fish species lives.” ○ “In last 15 years in area of Upper Drina white-water rafting and other recreational activities have significant development generating income for the local communities. The hydropower development in the area of Upper Drina will block already existing initiatives and activities which supports local sustainable development.” ○ “Most of the hydro projects from the proposed Greenfield list is controversial and from the aspect of transboundary impact very sensible, so it is an additional argument to remove them from the list.” ● On Principles: <ul style="list-style-type: none"> ○ Most of the requirements which would guarantee the sustainable use of resources have been transposed in local legislation. “However, in practice all hydropower project are followed with controversial misuse or violation of the laws. When it comes to EIA procedures, payment of concession fees, consultations and 	<p>ensure that hydropower is developed in compliance with the highest standards of ecological preservation.</p> <p>On specific hydropower plants included in the draft list of projects: The indicative list of projects reflects the results of the assessment undertaken by the team on the basis of data provided by relevant institutions/organisations up to the first quarter of 2017. More details on the process (screening, MCA, expert assessment) and next steps can be found in the general response to comments.</p> <p>On general comments:</p> <ul style="list-style-type: none"> ● Small hydropower plants: The Final Report provides an opinion with regard to the role of small hydropower plants; in addition, the Report reinforces the need for the adequate consideration of the environmental and social impact incurred by the construction of small hydropower plants, including of any cumulative effects caused by the potential construction of several small HPPs in a cascade. ● Investments in wind and solar generation: There are several reports already available on the potential for wind and solar generation, as well as biomass, etc. in the Western Balkans. One such example is a recent study by IRENA, available here. Another example is the work undertaken by the Energy Community, which is detailed here. The EC has also commissioned a Regional Study on Energy Efficiency and Renewable Energy Potential in the Western Balkans (details available here) to collect relevant data to undertake an in-depth analysis of a techno-economic options analysis on energy efficiency and renewable energy in the Western Balkan 6 countries. For renewable energy this will feed into a Remap study being undertaken by IRENA whereas the assessment of energy efficiency potentials will be utilized by DG ENERGY in parallel to work being carried out by others on EU Member States. <p>As it may be noticed from the statistics available on the IRENA and/or Energy Community webpages, the renewable energy mix in the region has gradually diversified, to include wind and solar.</p> <p>As indicated from the start of the Regional Strategy for Sustainable Hydropower in the Western Balkans assignment (see details here), this Study is not intended to reverse any of these trends or any other commitments/development plans in the other energy generation sub-sectors. It has however</p>
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		<p>inclusion of other parties (another entity, country or even municipality) in the early stages of planning, taking into account climate change predictions etc. all hydropower projects are very far from what they are recommended or obliged to do. Therefore, we hardly can support and understand the concept of “sustainable hydropower development”.”</p> <ul style="list-style-type: none"> ○ “Environmental consideration of large hydropower plants related to greenhouse gases and climate change are still the main contra arguments but local environmental impacts, access to water and high costs of investments should be considered too. Large hydropower plants are accompanied with large volume of reservoirs which affect the natural river flow and decreasing quality of the water which is contrary to the goals of the Water Framework Directive and Danube Convention which are looking for good status of waters.” ○ “An investment into the grid integration, reduction of losses and energy efficiency will bring more benefits than investments in new productions capacities.” ○ The need to develop river basin management plans in accordance with IWRM principles. ○ “Western Balkan countries have unique nature and biodiversity which are closely connected to the rivers and represent European natural heritage which should be preserved and protected.” 	<p>intended to stress the need for the sustainable development of hydropower resources in the region in the face of continuing investments in this sub-sector.</p> <ul style="list-style-type: none"> • The role of the WBIF: As it may be noticed from www.wbifeu, the current WBIF energy portfolio comprises more than EUR 170 million in investment and technical assistance grants, across sub-sectors. The large majority has been allocated to rehabilitation/construction of electricity lines and substations, including smart metering (43%) and energy efficiency measures in industry and buildings (35%). The WBIF has also supported investments in wind and biomass, with the first pilot project now in operation in the former Yugoslav Republic of Macedonia. Support to the hydropower sector represents 4% of the current portfolio (including the current Strategy assignment); it comprises 5 projects which received TA for feasibility studies and environmental and social impact assessments. All TA grants require the application of international norms and best practices, including those concerning environmental and social studies. There is hence little evidence to support that WBIF has worked against any particular energy sub-sector and/or against environmental, social and development goals. <p>On the principles: All comments will be duly considered in the final draft of the Principles. Some of the matters raised exceed however the scope of the Principles, as they are about the application in practice of such Principles as well as of the legislation in force.</p> <p>Since the beginning of the Study civil society organisations have been sharing their views and they are invited to raise such concerns during the project preparation process, as appropriate.</p>
6	<p>BANKWATCH EKOTIM BOSNIA AND HERZEGOVINA</p>	<ul style="list-style-type: none"> • On Final Report: <ul style="list-style-type: none"> ○ NO LIST of greenfield: “we do not find it appropriate for the EU to back a list of greenfield hydropower projects in the region at this stage. In our experience, disclaimers regarding the need for the countries to conduct EIAs, SEAs, identify no-go zones etc do not work, and such priority lists tend to become trump cards used by project proponents to push through projects at any cost.” ○ p.12, final para and p.1V, first para: disagreement on whether feed-in tariffs will be phased out or not. ○ p. 27: comments on SWOT (over-reliance on hydropower = a weakness rather than strength; etc.) ○ p. 29: update reference to methane contribution to CC; 	<p>Comments gratefully acknowledged.</p> <p>In its policy dialogue with all Western Balkan partners, the European Commission continuously emphasises the need by countries to calibrate their investments in hydropower generation, in order to achieve the right balance between diversification and security of energy supply an emphasis on renewables, and nature protection. This is done, in particular, in the framework of the Stabilisation and Association agreements and within the Energy Community. We have also made clear that the European Commission will provide technical assistance for project preparation in full compliance with the acquis.</p>

	<ul style="list-style-type: none"> ○ p. 45-47: caveat on good practices to stress the absence of data. ○ p. 74: two projects out of our list do not seem to be under construction as yet; to re-check data. ○ p. 74 – 75: standardize country presentations. ○ p. 75 -77: comments on individual HPP projects; to check and amend as appropriate; ○ a summary of changes to the MCA following stakeholder comments ○ greenfield projects which are not recommended: <ul style="list-style-type: none"> ▪ Gornja Neretva HPS (BIH): “Given the presence of such sensitive species, the upper Neretva’s Emerald – and likely future Natura 2000 status - and the need for further research on other species, we consider it would be highly inappropriate to include this on an EU-endorsed list of Recommended Projects.” ▪ Gornja Drina (BIH): the Drina is the regions prime river for the endangered Danube Salmon (Hucho hucho). ▪ Morača Cascade (Montenegro): “Both the Morača Valley and the Skadar Lake qualify as areas to be protected under the Birds and Habitats Directives. Together with the requirements of the Water Framework Directive virtually forbidding projects that degrade the good ecological status of water bodies, it is hard to see how dams can be built on the Morača without violating EU legislation. “ ○ p. 92: questions electricity demand increase projections. ○ P. 93 ff: Action Plan: agree with three revisions proposed on reaching inter-state agreements which should aim for better management of water resources in general. ● On Summary Sheets: <ul style="list-style-type: none"> ○ do not show why one hydropower plant is better than the other ○ do not analyse the weaknesses of the projects or show what it was about other projects which fell short compared to the ones finally chosen ○ Bjelimići and Glavatčevo: do not analyse the project risks or costs for competing activities such as tourism and fishing and state why it was decided they could be overcome. no indication is given as to how the projects could be carried out in line with EU legislation ○ Buk bijela, Foča, Paunci, Sutjeska: “All the benefits named for the project except for flood protection are applicable to any hydropower plant projects, and potentially also to other renewable energy projects, therefore they do not show why these projects in particular were chosen.” “There is a disconnect between these project sheets which suggest only preliminary EIAs have been carried out and p.74 of the Final Report which suggests that Buk 	<p>For candidate countries and potential candidates, the EU energy and environmental acquis, independently of its transposition status in the region, remains the reference for hydropower development. The EU renewables directive notably states that the assessment, planning or licensing procedures for renewable energy installations should take all Union environmental legislation into account. The European Commission also recently adopted guidance on the requirements for hydropower in relation to EU Nature legislation and the Water Framework Directive. It is based on EU Member States’ experience and good practices of other stakeholders, including private sector and civil society. This guidance is an important tool that we promote to ensure that hydropower is developed in compliance with the highest standards of ecological preservation.</p> <p>On the Final Report:</p> <ul style="list-style-type: none"> ● Please see response #1 above on the purpose of the Study. ● p12 comment: Please see current wording in the Final Report. - p 27 comment: Please see current wording in the Final Report (the text has been revised except for those categories of weaknesses/threats which had already been covered by larger categories already present in the previous version). The region’s high reliance on hydropower was seen as dominantly positive due to: low operational cost of generation ; reliable, proven and mature technology, providing stable source of electricity; ability of countries to reduce their imports and reduce market price risks; development of local industries and expertise relevant for planning, construction, equipping and operation of HPPs. The continuing strategic role played by hydropower in the region is also supported by a recent study published by IRENA, available here, while acknowledging the advancement of other renewable technologies and the environmental and social considerations that will have to be taken into account in the planning of further development. - p 29 comment: The value will be updated to reflect the 20-year horizon. - p 45 – 47 comment: Data collection is part of the pre-planning and planning/project preparation processes. There is no mention in the section on best practices which would make one think that these best practices are sufficient in themselves. The lack of data has been indicated throughout the Report and actions/measures have been identified with a view to addressing it systematically/locally, as appropriate (see Annex 1). More details are provided in Section 1 above.
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		<p>Bijela, Paunci, and Foča have construction permits – presumably not possible without environmental permits having been issued first.”</p> <ul style="list-style-type: none"> ○ Morača cascade – Andrijevo, Milunovići, Raslovići, Zlatca: same comments as with the others. 	<ul style="list-style-type: none"> - p 74 comment: The data on the exact status of the projects were collected up to the first quarter of 2017. The status of some of these projects may have meanwhile changed. More details are provided in Section 1 above. - (p 74-75 comment): Country summary data is presented in accordance with the available information at the time of preparing the study. A note has been added in the Final Report to introduce the country presentations and explain potential differences as well as indicate that this section is to be read in conjunction with the measures included in Annex I to the Final Report (i.e. there are regional actions which aim to address common issues). <p>On recommended greenfield projects: As emphasized in the report, the list of recommended greenfield projects represents the projects which have been found to be comparatively better than the other project that have analysed. This does not imply that those projects should be constructed, nor can this study replace the development procedure every project needs to undertake in accordance with national legislation (including SEA/ESIA/EIA). The recommendation of this study is limited to further evaluation of the recommended projects as they seem to be comparably more probable to be successfully developed. The outcome of the MCA as introduced in the Final Report will be dated so as to clearly introduce their preliminary nature in point of future studies/assessments if undertaken in the future with regard to any of the projects on the list.</p> <ul style="list-style-type: none"> - p 92 comment: The current version of the text does not maintain that the demand for electricity will grow “indefinitely,” as suggested. The scenarios provided in the Final Report as well as in the corresponding background report represent the data available to date, a fact which has been emphasised throughout the reports. It is true that additional data and studies are needed; however, this is to be addressed through subsequent studies. For instance, the potential for EE savings and the mapping of renewable resources are underway, with studies ongoing (e.g. Regional Study on Energy Efficiency and Renewable Energy Potential in the Western Balkans). - P 93. ff. Annex 1: Regional Action Plan on the Hydropower Development - Proposals for Follow-Up Actions): The actions included in the Appendix cannot exceed the scope of this Study, which focuses strictly on hydropower. The comments
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			<p>made on specific actions has been duly reflected in the updated Final Report.</p> <p>On the summary sheets: The purpose of the summary sheets is to briefly introduce the projects included in the List in point of location, investment costs, status of preparations, with a focus on those areas which are still in need of addressing, etc. The purpose of the summary sheets is not to prioritize the projects from the list over the others.</p> <p>On specific hydropower plants included on the draft list of projects for Bosnia and Herzegovina and Montenegro: The indicative list of projects reflects the results of the assessment undertaken by the team on the basis of data provided by relevant institutions/organisations up to the first quarter of 2017. More details on the process (screening, MCA, expert assessment) and next steps can be found in the general response to comments.</p>
7	Albanian CSOs group	<ul style="list-style-type: none"> • Fine with MCA results now that environmental factors weigh more. • Stress the need for the EU to press the ALB Gov to transpose and implement EU Acquis • No greenfield HPP is needed at the moment in ALB, particularly not on Vjosa or Valbona National Park • Small HPPs should be stopped in ALB / the region 	<p>Feedback gratefully acknowledged. In its policy dialogue with all Western Balkan partners, the European Commission continuously emphasises the need by countries to calibrate their investments in hydropower generation, in order to achieve the right balance between diversification and security of energy supply an emphasis on renewables, and nature protection. This is done, in particular, in the framework of the Stabilisation and Association agreements and within the Energy Community. We have also made clear that the European Commission will provide technical assistance for project preparation in full compliance with the acquis.</p> <p>For candidate countries and potential candidates, the EU energy and environmental acquis, independently of its transposition status in the region, remains the reference for hydropower development. The EU renewables directive notably states that the assessment, planning or licensing procedures for renewable energy installations should take all Union environmental legislation into account. The European Commission also recently adopted guidance on the requirements for hydropower in relation to EU Nature legislation and the Water Framework Directive. It is based on EU Member States' experience and good practices of other stakeholders, including private sector and civil society. This guidance is an important tool that we promote to ensure that hydropower is developed in compliance with the highest standards of ecological preservation.</p> <p>On specific hydropower plants included on the draft list of projects: The indicative list of projects reflects the results of the assessment</p>

			<p>undertaken by the team on the basis of data provided by relevant institutions/organisations up to the first quarter of 2017. More details on the process (screening, MCA, expert assessment) and next steps can be found in the general response to comments.</p> <p>On small hydropower plants: The Final Report provides an opinion with regard to the role of small hydropower plants; in addition, the Report reinforces the need for the adequate consideration of the environmental and social impact incurred by the construction of small hydropower plants, including of any cumulative effects caused by the potential construction of several small HPPs in a cascade.</p>
8	ELEKTROPRIVRE DA REPUBLIKE SRPSKE - TREBINJE	<ul style="list-style-type: none"> • Provided missing investment/cost data for the summary sheets on HPP Buk Bijela, HPP Foca, HPP Paunci and HPP Sutjeska. 	Additional data gratefully acknowledged.
9	MINISTRY OF FOREIGN TRADE AND ECONOMIC RELATIONS OF BOSNIA AND HERZEGOVINA	<p>(Cover letter with supporting documents in local languages.)</p> <p>General comments:</p> <ul style="list-style-type: none"> • We found that the entire Study has a significant contribution to further work on the preparation of sustainable HPP projects. It clearly emphasizes the importance of respecting procedures prescribed by the relevant EU legislation and international agreements in the preparation of strategic and program documents, spatial planning documents and individual projects (Renewable Energy Directive, Energy Efficiency Directives, Environmental Impact Assessment Directive, Strategic Environmental Assessment Directive, Water Framework Directive, Habitats Directive , Floods Directive...). • We strongly support preparation of such a comprehensive document that is of a significant importance for Bosnia and Herzegovina and for all others WB6 countries. However, we believe that a more time for drafting such document was needed. We would like to emphasize that unfortunately, in the Final report, some wrongly mentioned facts are stated, and therefore the proposed individual measures based on that facts that suggest certain measures and activities, are not acceptable (there is no clear information from which competent institutions you took over data that are further processed, within the Study a "working materials" from certain other projects were used, and individual "working conclusions" were used, which were not verified at the end). • The representatives of BiH relevant institutions took part in the workshops in Podgorica and Tirana, and submitted to a consultant or DG NEAR, in written form, remarks and suggestions to the presented reports. We would also like to emphasize that, having in mind the size of the provided BRs and the fact that in the period from the 2nd workshop in Tirana to the final workshop in Skopje, the BRs have been significantly improved by the 	<p>Feedback gratefully acknowledged, with specific responses on supporting documents/individual letters provided below.</p> <p>As with any Study, the Final Report provides an overview of principle outcomes/conclusions based on the data provided by key stakeholders up to the first quarter of 2017. Such outcomes/conclusions are thus dated, i.e. it reflects the information available at the level of 2017. More details are provided in Section 1 above.</p>

	<p>consultant, it was not possible to give more detailed comments in such a short time.</p> <ul style="list-style-type: none"> • <u>Our main comment is, since the Final report states that the project data was not uniform, that the submitted data were incomplete and not verified, multi – criteria assessment (MCA) that was carried out within this Study should be dynamically adjusted in accordance with the new data/developments in the projects and supplemented with possible new projects.</u> • We believe that, with this additional analysis and possibly the revision of limit values for certain criteria, such defined MCA could be used as a tool for identifying potential sustainable HPPs projects in BiH 	
	<p>Letter from the Agency for Adriatic Sea Catchments – Mostar (08.01.2018): The final document, unfortunately, in certain places, comprises inaccurately stated facts, and consequently even the proposed individual measures based on erroneous allegations (there are no clear information from which competent institutions “the data were taken from” to be further processed, “working materials’ of some other projects were used, and on the basis of certain “working conclusions” (which were not finally verified), certain measures and activities were proposed, which is in no case acceptable). Notwithstanding the above, we think that the entire document represents a significant contribution to further activities in the preparation of sustainable hydropower projects.</p> <ul style="list-style-type: none"> • On the reform measures: The document clearly emphasizes the importance of compliance with the procedures prescribed by the Water Framework Directive in the planning of new hydropower plants regardless of their size, as well as the necessity of implementing the procedures of the SEA and EIA directives during the phases of preparation of strategic and program documents, spatial planning documentation and individual projects themselves. As the draft of the Final Report presented in its Annex 1 the Proposals for Follow-up Activities that should be implemented in the upcoming period both at the level of individual countries and at the regional level, we think that it would be necessary to consider the proposed activities as soon as possible, with the appropriate cross-sectoral cooperation of state and entity institutions from the sector of energy, spatial planning, environment and water, and determine further steps and activities. • Fine with the principles; • On the list: since the final report stated that the data on projects were not uniform, the provided data were incomplete and not verified, we think that it should not be “adopted”, but only acknowledged as a result of the multi-criteria analysis (MCA) that was carried out within this project. We think that, with the previous additional analysis and eventual necessary re-finalizing of the limit values for certain criteria, such a defined multi-criteria analysis could be used as a tool for determining the potential sustainable hydropower projects in B&H. 	<p>Feedback gratefully acknowledged.</p> <p>On the reform measures (Annex 1 to the Final Report): Please see details in Section 1.</p> <p>On specific hydropower plants included in the draft list of projects: The indicative list of projects reflects the results of the assessment undertaken by the team on the basis of data provided by relevant institutions/organisations up to the first quarter of 2017. More details on the process (screening, MCA, expert assessment) as well as on the meaning of the process can be found in the general response to comments.</p> <p>.</p>

	<p>Letter from the Agency for Adriatic Sea Catchments – Mostar (13.02.2018): no additional data / no accuracy checks on the projects included in the list can be provided as none of the projects have been proposed by the Agency.</p>	<p>Feedback gratefully acknowledged.</p>
	<p>Letter from Sava River Watershed Agency – Sarajevo (13.02.2018): no additional data / no accuracy checks on the projects included in the list can be provided as none of the projects have been proposed by the Agency. “The Draft of the first Sava River Basin Management Plan, which is currently in the adoption phase comprised the list of the future hydropower facilities on the Sava River Basin in the Federation of B&H taken from the strategic documents of the energy sector.”</p>	<p>Feedback gratefully acknowledged.</p>
	<p>Letter from ELEKTROPRIVREDA BOSNE I HERCEGOVINE – Sarajevo (14.02.2018): Provided missing details for: Jablanica, Una Kostela, System of Gornja Neretva Bjelimići, System of Gornja Neretva Glavatičevo.</p>	<p>Additional data gratefully acknowledged..</p>
	<p>Letter from ELEKTROPRIVREDA HRVATSKE ZAJEDNICE HERCEG BOSNE d.d. Mostar (14.02.2018): The assessment made in this study is unclear and methodologically deficient, and that, in the ranking of projects, the status of projects planned by PE Elektroprivreda HZ HB were significantly underestimated, and in particular the projects for which the public interest was declared (PHPP Kablič, HPP Ugar Ušće, HPP Ivik, HPP Vrletna kosa, HPP Han Skela). Also, the planned projects for the Revitalization of existing plants comprise none of the plant of PE Elektorprivreda HZ HB d.d. Mostar, although the revitalizations were certain and planned. [...] the Regional Strategy for Sustainable Hydropower in the WB6 (Regional Strategy for Sustainable Hydropower in the Western Balkans) is not acceptable in the submitted form and we are asking for its revision with an adequate validation of the projects nominated by PE Elektroprivreda HZ HB d.d. Mostar.</p>	<p>Feedback gratefully acknowledged.</p> <p>As with any Study, the Final Report provides an overview of principle outcomes/conclusions based on the data provided by key stakeholders up to the beginning of 2017. Such outcomes/conclusions are thus dated, i.e. it reflects the information available at the level of 2017.</p> <p>On specific hydropower plants included in the draft list of projects: The indicative list of projects reflects the results of the assessment undertaken by the team on the basis of data provided by relevant institutions/organisations up to the first quarter of 2017. More details on the process (screening, MCA, expert assessment) and next steps can be found in the general response to comments.</p>
	<p>Letter from ELEKTROPRIVREDA HRVATSKE ZAJEDNICE HERCEG BOSNE d.d. Mostar (11.01.2018): In the methodology adopted and implemented in the subject study, the authors categorized the projects related to hydropower plants based on the mathematical model (multi-criteria decision making) and available input data, taking into account five criteria: technical suitability, financial sustainability, social sustainability, environmental issues and current readiness for realization. In addition, the project that was technically better prepared at the time of the study preparation in comparison to another project that was still under consideration, was added more points. We believe that this segment of the assessment was methodologically erroneous given that the project that was still under consideration could be significantly more effective in relation to the project that is currently more readily available for implementation. In that sense, the results and ranking in accordance with the methodology applied in this study, yet within, for example, one year can significantly deviate from the currently identified ones. In other words, we believe that this study should be</p>	<p>Feedback gratefully acknowledged.</p> <p>As with any Study, the Final Report provides an overview of principle outcomes/conclusions based on the data provided by key stakeholders up to the beginning of 2017. Such outcomes/conclusions are thus dated, i.e. it reflects the information available at the level of 2017.</p> <p>On specific hydropower plants included on the draft list of projects: The indicative list of projects reflects the results of the assessment undertaken by the team on the basis of data provided by relevant institutions/organisations up to the first quarter of 2017. More details on the process (screening, MCA, expert assessment) and next steps can be found in the general response to comments. In addition:</p>

	<p>dynamically adjusted in accordance with the movements of development in the projects mentioned above and supplemented with possible new projects.</p> <ul style="list-style-type: none"> the status of projects planned by PE Elektroprivreda HZ HB was significantly underestimated, in particular the projects for which the public interest has been declared (CHE Kablić, HPP Ugar Usce, HPP Ivik, HPP Vrletna kosa, HPP Han Skela) and which have been the subject of elaboration of project and study documentation in the past decade. Planned projects of Revitalization of existing plants (HPP Jajce 2 and PHPP Čapljina) are not comprised within this Study. For PHPP Vrilo, it is stated in the enclosed documentation that it is located on the Neretva River Basin – we shall indicate that PHPP Vrilo is located on the Cetina River Basin. the projects of PE Elektroprivreda HZ HB (HPP Ugar Ušće, HPP Ivik, HPP Vrletna kosa, HPP Han Skela) listed in Table A2.2: Underperforming projects should be categorized into the Recommended Projects category (when other titles in this category are studied, it is evident that the projects of PE Elektroprivreda HZ HB neither lag behind those in any sense, nor are less significant) or at least in the category A2.1: Reasonably good projects we do not find the reason why the facilities of pumped hydropower plants are not worth to be in the Recommended Projects category, especially because of their importance in balancing electricity at a time when significant integration of renewable energy sources (wind farms, solar power plants, etc.) is certain in the coming period. In accordance with the above, and in the context of PHPP Vrilo, we consider that it should be included in the mentioned category, since it is a facility of distinctive character. in the table A2.4: Reversible hydropower projects, it is necessary to add the project PHPP Kablić on the Cetina River Basin since it is a public interest facility, and it is not comprised within this table. this study should envisage and include projects for revitalization of HPP Jajce 2, PHPP Čapljina, and HPP Jajce 1 in the mid-term plan, as the Study included planned revitalization projects till 2030. In this sense, it is more than certain that in the period till 2030, it will be necessary to revitalize HPP Jajce 2, PHPP Čapljina (2020-2025) and HPP Jajce 1 (2025-2030) + a list of additional documentation produced on the Vrbas River Basin <p>+ basic information on the projects of the HPPs on the Vrbas River Basin (HPP Ugar Ušće, HPP Ivik, HPP Vrletna Kosa, HPP Skela), HPPs on the Cetina River Basin (PHPP Kablić) and the revitalization project of the HPP Jajce 2.</p> <p>Letter from Elektroprivreda Republike Srpske (14.02.2018): investment/missing data for HPP Buk Bijela, HPP Foča, HPP Paunci and HPP Sutjeska</p>	<ul style="list-style-type: none"> The HPPs proposed for rehabilitation - HPP Jajce 2, PHPP Čapljina, and HPP Jajce 1 – are currently missing from the Study because of no data made available at the time of the Study. Cetina river basin has not been considered as such in this Study (most of the river course lies in Croatia); for the purposes of this study, Vrilo was assigned to the nearest Neretva river basin. As elaborated in the Final Report, pumped storage plants are very important for the operation of the electric power systems. However, they do not contribute to the overall energy generation, and for that reason, the consultant has decided not to compare them directly to other greenfield projects but has organised them in a separate list; REV – reversible project list. This does not undermine their value, it is just that the rationale for their investment consideration is different. More details to that effect have been provided in Annex 2 to the Final Report and in Background Report#8. On PHPP Kablić: The minimum information required to run the MCA (e.g. investment value) was not provided during the data collection efforts for this Study. The HPP is thus missing from the current version of the Report. <p>The indicative list of projects thus reflects the results of the assessment undertaken by the team on the basis of data provided by relevant institutions/organisations up to the first quarter of 2017. More details on the process (screening, MCA, expert assessment) as well as on next steps can be found in the general response to comments.</p>
	<p>Letter from Elektroprivreda Republike Srpske (14.02.2018): investment/missing data for HPP Buk Bijela, HPP Foča, HPP Paunci and HPP Sutjeska</p>	<p>As with response #3: Additional data gratefully acknowledged.</p>

	<p>Letter from the Federal Ministry of Energy, Mining and Industry (26.01.2018): quotes letters submitted to the Ministry by PE Elektroprivreda BiH d.d. Sarajevo and PE Elektroprivreda HZ HB d.d. Mostar</p>	<p>Letter/comments gratefully acknowledged; individual responses to letters quoted provided in this document.</p>
	<p>Letter from Federal Ministry of Agriculture, Water Management and Forestry (14.02.2018): We have no mandate to provide a unified response. However, it is evident from those that the approaches are not harmonized for the list of potential projects for the sustainable development of hydropower plants. The Federal Ministry of Agriculture, Water Management and Forestry is of the opinion that it is necessary to harmonize the comments as much as possible, especially considering that it is a list based on the Strategy of Sustainable Development for the Western Balkans, which should have included the requirements of relevant directives in the field of energy, water, environment, etc. Accordingly, we hold an opinion that it is unacceptable that the list of priorities, possibly due to nonconformity, comprise the facilities that are disputable from the standpoint of domestic plans and regulations.</p>	<p>Feedback gratefully acknowledged.</p> <p>On specific hydropower plants included in the draft list of projects: The indicative list of projects reflects the results of the assessment undertaken by the team on the basis of data provided by relevant institutions/organisations up to the first quarter of 2017. More details on the process (screening, MCA, expert assessment) and next steps can be found in the general response to comments.</p>
	<p>Letter from ELEKTROPRIVREDA BOSNE I HERCEGOVINE – Sarajevo (10.01.2018): - quoted in the letter from the Federal Ministry of Energy</p> <ul style="list-style-type: none"> • total of 24 hydro power plant projects have been identified by the Plan of EPBiH. Out of those, pursuant to the Decision of the Government of the FB&H on promulgation of public interest and the access to the preparation and construction of priority electricity facilities in the Federation of Bosnia and Herzegovina, Official Gazette of the Federation of B&H No. 8/10 (Public interest of FB&H), 9 projects were covered: Vranduk, Bjelimići, Glavatičevo, Bjelimići pumpna, Ustikolina, Babino selo, Vinac, Čaplje and Kruševo. • 9 projects of hydro power plants from the Plan of EPBiH were not treated by the Study as the projects with a capacity of <10 MW: Maglaj, Bradici (Komšići), a Group of mHPP Neretvica, mHPP Čatići Kakanj, mHPP Kljajići, Dolina, Globarica, Zeleće and mHPP Lašva. • Out of 24 projects of hydropower plants from the Plan of EPBiH, the Study treated 15 projects with installed capacity of >10 MW i.e.: Vranduk, Una Kostela - annex, Bjelimići, Glavatičevo, Bjelimići pumpna, Ustikolina, Kovanici, Babino selo, Goražde, Janjići, Vinac, Čaplje, Kruševo, Tegare and Kozluk. • Through the multi-criteria assessment of the Study, the Vranduk project was characterized as a project in the implementation and Una Kostela project as a candidate for rehabilitation • 8 hydropower plant projects from the Plan of EPBiH were rated as “reasonably good projects” in the B group, i.e.: Ustikolina, Kovanica, Babino selo, Goražde, Janjići, Vinac, Tegare and Kozluk. • Two projects of the Plan of EPBiH were assessed as “the projects with no prospect for success” in group C of the multi-criterial assessment, i.e.: Čaplje and Kruševo 	<p>Feedback gratefully acknowledged. We understand that there are no objections to the current list.</p> <p>On specific hydropower plants included in the draft list of projects: The indicative list of projects reflects the results of the assessment undertaken by the team on the basis of data provided by relevant institutions/organisations up to the first quarter of 2017. More details on the process (screening, MCA, expert assessment) and next steps can be found in the general response to comments.</p>

	<ul style="list-style-type: none"> The Study recommends within the Group A the implementation of about 130 MW of installed capacities, which is 20% of the Plan of EPBiH; in the group B, about 480 MW of installed capacities were assessed as the reasonably good projects, which is about 75% of the Plan of EPBiH. The Study assesses about 5% of the planned installed capacities of EPBiH as projects with no prospect for success and classified those in group C. 	
	<p>Additional information on official river basins:</p> <ul style="list-style-type: none"> Trebišnjica and Neretva rivers basins: Trebišnjica River is being defined as a tributary of the Neretva river, i.e. the fact that these are two separate basins is disregarded. Pursuant to the Water Law in the Republic of Srpska (Official Gazette of RS, No. 50/06, Article 4), the term “Regional river basin (district)” is introduced, “meaning the area of land made up of one or more neighboring river basins together with their associated groundwater, identified with a special decision of the competent authority of the Republic, under Article 3(1) of the Directive 2000/60/EC dated October 23, 2000 (“Official Gazette of the EC”, No L 327, dated December 22, 2000), as the main unit for management of river basins”. Thus, for the purposes of water management in the territory of the Republic of Srpska, the following regional river basins were established: Sava Regional River Basin; Trebišnjica Regional River Basin. The Trebišnjica regional river basin includes the Trebišnjica river basin with the sub-basins of the rivers Mušnica, Sušica, the major part of the sub-basin of Dubrovačka rijeka (Ombla) with neighboring underground streams with more than one hundred springs, located in the districts from Duboka Ljuta to Metkovići and from Metkovići to Svitansko-Deransko blato, as well as the adjacent part of the Neretva river basin. Please note that within the “Neretva and Trebišnjica River Basin Management Project”, which was funded by the World Bank (i.e. by its Global Environment Fund-GEF Foundation), special management plans for Trebišnjica and Neretva basins have been developed. Upon examining the Chapters 2.2 and 2.3. of “Hydrology Water Management”, it can not be said that the processors implicitly placed the Trebišnjica basin in the Neretva basin, but the following should, among other matters, be improved: 1. The data on both basins are specially presented in the several parts of the text, but what should be corrected is that the Chapter 2.2 of the Mediterranean Drainage Basin, instead of three basins that gravitate towards the Adriatic Sea, presents the four of those (i.e. Neretva basin and Trebišnjica basin separately); 2. The text constantly refers to “Neretva-Trebišnjica”, even though in some cases should be used “Trebišnjica and Neretva”. 3. In Table 2.2., the “Neretva” column also needs to be corrected to read as “Trebišnjica and Neretva”, because the data are given summarily, i.e. on average for both basins. 4. The text should include a footnote, i.e. 	<p>Feedback gratefully acknowledged.</p> <p>On Trebišnjica and Neretva river basins: These comments refer to a Background Report which was finalized in December 2017. A note will however be made and published at the same address as the Background Report to that effect.</p>

take over a part from the accompanying document, which indicates that, according to the Water Law of RS, the Trebišnjica Regional River Basin is defined as a separate catchment.

Additional information from ELEKTROPRIVREDA HRVATSKE ZAJEDNICE HERCEG BOSNE d.d. Mostar on:

- ANALYSIS OF PLANNED HYDROPOWER PLANTS ON THE DOWNSTREAM OF THE DRINA RIVER: solving of flood and drought issues is planned with a construction of four hydropower plants (HPP “Kozluk”, HPP “Drina 1”, HPP “Drina 2” and HPP “Drina 3”). The accumulations are formed between the side embankments, which, in addition to the fall concentration, achieve the protection of the coastline against flood. [...] planned facilities in the area of the downstream of the Drina River should be a priority for both B&H/the Republic of Srpska and Serbia.
- ANALYSIS OF PLANNED HYDROPOWER PLANTS ON THE DOWNSTREAM OF BOSNA RIVER: In the area of the downstream of the Bosna River seven dam hydropower plants were planned (HPP “Doboj”, HPP “Cijevna 1”, HPP “Cijevna 2”, HPP “Cijevna 3”, HPP “Cijevna 4”, HPP “Cijevna 5”, and HPP “Cijevna 6”. [...] such investments in these facilities are justified, especially if it is known that these facilities, except for energy effect, have significant water management effects (reduction from floods and drought). If the Republic of Serbia is analyzed and the priorities of construction of hydropower facilities in the “REGIONAL STRATEGY FOR SUSTAINABLE HYDROENERGY IN THE WESTERN BALKANS”, we think that these facilities could be a priority.
- ANALYSIS OF PLANNED HYDROPOWER PLANTS ON THE DOWNSTREAM OF VRBAS RIVER: In order to protect the area of the downstream of the Vrbas River, it is needed to build the planned hydropower plants, which will, in addition to protection against flood, enable the accumulation of water that will serve also for irrigation of significant agricultural areas in this territory. In the area of the downstream of the Vrbas River four up-to-dam hydropower plants were planned (HPP “Trn”, HPP “Laktaši”, HPP “Kosjerevo” and HPP “Razboj”. [...] such investments in these facilities are justified, especially if it is known that these facilities, except for energy effect, have significant water management effects (reduction in floods and droughts). If the Republic of Serbia is analyzed and the priorities of construction of hydropower facilities in the “REGIONAL STRATEGY FOR SUSTAINABLE HYDROENERGY IN THE WESTERN BALKANS”, we think that these facilities could be a priority.

On the additional information provided for prospective hydropower plants on the Rivers Bosna, Drina, and Vardar: We gratefully acknowledge the provision of the investment value as part of the comments; however, given the amount of effort required to re-run the entire MCA against the database (in order to obtain comparable results all data will have to be revisited), this information can only be used in future re-runs of the MCA analysis.

On specific hydropower plants included in the draft list of projects: The indicative list of projects reflects the results of the assessment undertaken by the team on the basis of data provided by relevant institutions/organisations up to the first quarter of 2017. More details on the process (screening, MCA, expert assessment) and next steps can be found in the general response to comments.

#	Sender	Contents	Response
10	EIB	<ol style="list-style-type: none"> 1. Supportive of the principles 2. Where it invests in hydropower EIB will promote best practice, supporting the EU approach to sustainability in compliance with EU legislation and EIB's Environmental and Social Standards available at http://www.eib.org/infocentre/publications/all/environmental-and-social-practices-handbook.htm. EIB is currently developing its Guidelines on Lending for Hydropower Projects that will further support EIB's commitment to promote best practice measures in sustainable hydropower development, so that it can deliver the benefits of economic development to society whilst protecting communities and the natural environment from the impacts that may arise. The Economic Resilience Initiative ("ERI") is an example of how the EIB is using its extensive experience in neighbouring regions and its strengths to boost investments that support long-term growth [details on how ERI can be used to address the factors delaying and/or blocking hydropower projects]. 3. <u>Particular comments to the attached documents and underlying studies:</u> <ol style="list-style-type: none"> 1. EIB supports in principle proposed documents as they are generally in line with above comments and our approach to support sustainable hydropower projects. 2. However, it is not clear to us what is the purpose of the list and the benefits for the projects being on the list. As explained above, we do not expect that the proposed documents will change our general approach of how shall we treat other hydropower projects from WB proposed for EIB financing (e.g. private sector investors may have different criteria for the projects selection). We have also noticed that there are projects which may be relevant for the EIB but not included on the list. 3. It is not clear how the HPP projects proposed on the list were finally selected. Does it mean that their documentation is more mature? We look forward to see the assumptions that justify the selection for those projects. 4. In general, we recommend greater stress to be placed on robust and comprehensive public participation with wider definition of stakeholders to be involved. 5. We would expect that proposed projects from the lists shall have/develop bankable documentation, however average readiness criteria has been assessed in underlying studies as very low (2.5 out of max 5). The Typical Project Data Requirements for financing HPP projects shall include: Relevant strategic level studies, e.g. SEAs, cumulative impact assessments, river basin 	<p>Feedback gratefully acknowledged.</p> <p>On the purpose of the list/Study: Please see response#5 and 9 above as well as the details provided in section 1 above</p> <p>On how the projects were selected: Please see Final Report as well as Background Reports #7 and 8, available at: https://www.wbif.eu/sectors/energy/sustainable-hydropower</p> <p>On public participation: Recommendations included in the Principles and Final Report.</p> <p>On the maturity of the projects included in the indicative list: Project maturity was one of the criteria applied in the MCA. No maturity threshold was applied for inclusion of the projects on the list. The list may include projects with low maturity, but with other favourable parameters (given the current project development level and information currently available). Therefore, the projects on the final list are not necessarily fully developed projects, but projects which seem to have the highest potential for successful development, considering environmental, technical, financial, etc. parameters.</p> <p>On 'no-go' zones: Background Report#3 (table on Proposed actions at the regional WB6 level) maintains: "Develop pre-planning mechanisms and designate "no-go" areas for new hydro-power projects." Since there is no exact formula for no-go zones establishment and proclamation, it is not possible to propose such zones within scope of this Study. WB6 countries should establish clear "no-go" areas for new hydro-power projects, based on the protection of conservation values and based on separate study (or studies) which have in focus only relevant and up to date environmental data.</p> <p>On electricity market changes & dated nature of some/most of the studies in place for the hydropower plants included on the list/in the Study: Aspects duly considered (including as limitations) in the Final and Background Reports.</p>

		<p>management plans, energy masterplans etc; Engineering/design reports, e.g. pre-feasibility/feasibility studies, scheme layouts etc.; Project level environmental and social studies, e.g. screening/gap analyses, due diligence reports, scoping reports and ESIA's etc.; Climate studies (vulnerability, GHGs, resilience planning etc); Environmental and social management plans, ESAPs, ESMPs etc; Stakeholder engagement plan and periodic summary reports.</p> <ol style="list-style-type: none"> 6. Study would benefit if it shall also affirm/propose "no-go" zonal approach (e.g. for sub-catchments), recognising protected areas but also important river reaches that support them. 7. The financial environment has significantly changed and assumptions used in feasibility analyses from 5 or more years ago are often very much off the mark. The majority of analysis was performed approximately 8 years ago, i.e. in 2008 or even earlier; practically before the financial crisis. Similar relevance observations can be made also for the electricity market prices; in the range of 100 €/MWh in 2008, and approximately 40 €/MWh in today's electricity markets. 8. In particular, regarding electricity market changes, it can be considered that all projects having documentation older than 3 years need to have their feasibility assessments revised. 9. Although there is a critical assessment of the input data, the inputs received from the stakeholders are used for MCA and the ranking. This may lead to subjective results due to the subjective inputs, regardless MCA methodology. 	
11	WORLD BANK	<p>We want to confirm our support for the proposed approach for integrated water resources management at river basin level and for a sustainable development of hydropower generation selection and development. We would like to highlight that the World Bank is already working, in collaboration with EU and regional stakeholders, in preparation of Water Resources Management River Reports prepared for BiH, Serbia and Montenegro with the financial support of WBIF.</p> <p>We plan to use these studies for a deeper assessment for the HPP development in the upper-mid Drina that can have a positive transboundary impact.</p> <p>We also want to confirm our support for rehabilitation of existing hydropower plants, as a first priority investment, to enhance safety and, to a limited extent, to upgrade the existing capacity. This is an area where we--jointly with SECO, KFW and EBRD--are also currently supporting Albania on its Drin cascade HPPs.</p> <p>Regarding the list of potential greenfield projects, we did not receive the draft reports serving as a basis for such selection, therefore we have no evidence on the criteria used for the selection of certain projects, however as mentioned in your</p>	<p>Feedback gratefully acknowledged.</p> <p>As indicated in the Final Report and throughout the background reports and the draft summary sheets, the development of river basin management plans and the undertaking of further specific project preparation studies are included as key recommendations.</p> <p>WB's intention to further support the rehabilitation of existing hydropower plants is also noted.</p> <p>With regard to the distribution of the reports/all outputs associated with the Study, these can be downloaded from: https://www.wbif.eu/sectors/energy/sustainable-hydropower , as indicated in the distribution emails/updates on the Study which have been circulated to all registered participants.</p>

		attachment, this list is subject to further exploration of the technical, financial and environmental feasibilities of each individual project	
12	EUROPEAN BANK FOR RECONSTRUCTION AND DEVELOPMENT	<ul style="list-style-type: none"> • Giving the priority to rehabilitation rather than new schemes is a good way to use the hydropower potential while making an environmentally/socially efficient use of water resources; • The rehabilitation investments should also perform climate change resilience audit and account its result in the investment plan; • The concerns raised during the last workshop by conservation CSOs and scientists regarding aquatic biodiversity protection do not seem to have been taken into account at all. The concerns raised by EBRD previously do not seem to have been considered either: namely, some of the schemes presented in the list might hardly be bankable if not part of a wider approach aimed at developing hydropower while meeting the countries obligations against biodiversity conservation treaties and conventions (eg Bern Convention). • We consider that simplistic approaches (like preferring a few large schemes to numerous small schemes) should be avoided: the fact that a hydropower project is good or challenging from an E&S point of view is not just a matter of size. • Limiting the greenfield projects to large HPP, it will make difficult for the WB6 to commit to the proposed principles in full, given the many on-going activities regarding new tenders for SHPPs in the region. • EBRD would recommend a binding Strategic Environmental Assessment of the hydropower sector at the basins (sometimes transboundary) level to form the basis for hydropower decision making, including all proposed hydropower schemes (not just those more than 10 MW). This is the only reasonable way to meet conservation objectives while making an efficient use of the hydropower potential of the region. • Further clarify the WBIF or EU financial support envisaged for the hydro projects, whether only TA or it is considered also Co-financing grant (i.e. TA for Climate change adaptation, co-financing grants or incentives for Rehabilitation when accounting Climate change resilience measures, Co-financing grant for transboundary projects). • The list of Greenfield project might be subject to periodically reviews if some of the planned large HPP, not included at this stage, will be reviewed to fit a more sustainable approach (some bankable project might be missed by this list or become bankable in the future)? 	<p>Feedback gratefully acknowledged.</p> <p>On rehabilitation: The Final Report as well as the Principles and relevant background reports emphasize the need for environmental restoration measures as part of the rehabilitation process (see chapter 14.1.5).</p> <p>On aquatic biodiversity: Please see Background Report #3.</p> <p>On small hydropower plants: The Final Report provides an opinion with regard to the role of small hydropower plants; in addition, the Report reinforces the need for the adequate consideration of the environmental and social impact incurred by the construction of small hydropower plants, including of any cumulative effects caused by the potential construction of several small HPPs in a cascade.</p> <p>On river-basin/trans-boundary strategic environmental assessment: Recommendation fully welcome and already included throughout the Final Report, particularly in Annex 1.</p> <p>On WBIF/EU financial support: As indicated throughout the preparation of the Study, the WBIF/EU will continue to provide technical assistance to hydropower project preparation as well as investment grants to grid connections and/or distribution/transmission lines up to generation point. In addition, the EU/WBIF will continue to finance river basin management plans and/or other reform measures which contribute to the sustainable use of water resources in the Western Balkans.</p> <p>On the regular reviews of the indicative list of greenfield projects: Please see general responses above.</p>
13	KORPORATA ELEKTROENERGJIKE SHQIPTARE - KESH	<p>On the rehabilitation list of projects:</p> <ul style="list-style-type: none"> • Replace Vau i Dejes (rehabilitation completed by 2007) to be replaced with Fierza HPP. • Provided additional information on the rehabilitation works considered for Fierza HPP. 	<p>Feedback gratefully acknowledged.</p> <p>On specific hydropower plants included in the draft list of projects: The indicative list of projects reflects the results of the assessment undertaken by the team on the basis of data provided by relevant</p>

			institutions/organisations up to the first quarter of 2017. More details on the process (screening, MCA, expert assessment) and next steps can be found in the general response to comments.
14	GOVERNMENT OF THE FORMER YUGOSLAV REPUBLIC OF MACEDONIA	Kind inquiry for a deadline extension.	Consultations ongoing until the end of August 2018..
15	MINISTRY OF MINING AND ENERGY, OFFICE FOR KOSOVO AND METOHIJA, PE EPS, MINISTRY OF ENVIRONMENT OF REPUBLIC OF SERBIA	Same comments as those provided under #1	Feedback gratefully acknowledged. Please see response#1 above for detailed responses.
16	BANKWATCH Aarhus Resource Center, Sarajevo, and Center for Environment, Banja Luka	<ul style="list-style-type: none"> • Issues regarding the EU's leverage to ensure compliance with EU legislation in the selected greenfield projects, especially in projects such as Buk Bijela and Morača and potentially other projects where Chinese, Turkish and other companies may be involved. • Second, we need to highlight specific legal violations in the Buk Bijela and Foča projects in Bosnia-Herzegovina which make it especially inappropriate for the EU to back these projects, as well as the lack of feasibility study carried out so far for Buk Bijela. • Draw your attention to a recent study which examines endangered fish species in the Balkans. It highlights the Morača, Upper Neretva and Drina as areas of particular importance for such species and highlights the unsuitability of these areas for hydropower development: Weiss S, Apostolou A, Đug S, Marčić Z, Mušović M, Oikonomou A, Shumka S, Škrijelj R, Simonović P, Vesnić A, Zabric D. (2018). Endangered Fish Species in Balkan Rivers: their distributions and threats from hydropower development. Riverwatch & EuroNatur, 162 pp., February 2018, https://balkanrivers.net/sites/default/files/Fish_Study_web.pdf • In these circumstances, it makes little sense for the EU to support any list of greenfield projects as it lacks the tools to make sure the projects are then further developed in accordance with EU legislation. • But it is especially worrying that the EU is considering explicit support for projects such as Buk Bijela and the Morača dams likely to be financed by Chinese, Turkish, and other non-EU banks which have not demonstrated real commitment to upholding EU legislation. • Buk Bijela: Memorandum signed with Chinese contractor in July 2017. Environmental permit re-issued and contested by Aarhus Resource Centre in Sarajevo (June 2018). The original environmental permit was issued in 2013. 	<p>Feedback gratefully acknowledged. In its policy dialogue with all Western Balkan partners, the European Commission continuously emphasises the need by countries to calibrate their investments in hydropower generation, in order to achieve the right balance between diversification and security of energy supply an emphasis on renewables, and nature protection. This is done, in particular, in the framework of the Stabilisation and Association agreements and within the Energy Community. We have also made clear that the European Commission will provide technical assistance for project preparation in full compliance with the acquis.</p> <p>For candidate countries and potential candidates, the EU energy and environmental acquis, independently of its transposition status in the region, remains the reference for hydropower development. The EU renewables directive notably states that the assessment, planning or licensing procedures for renewable energy installations should take all Union environmental legislation into account. The European Commission also recently adopted guidance on the requirements for hydropower in relation to EU Nature legislation and the Water Framework Directive. It is based on EU Member States' experience and good practices of other stakeholders, including private sector and civil society. This guidance is an important tool that we promote to</p>

		<p>Environmental study did not take the potential cumulative impact of Buk Bijela and Foca HPPs and consultations were deficient. Article 98, paragraph 1.e) of the Republika Srpska Law on Environmental Protection (Official Gazette of Republika Srpska no. 71/12, 79/15) states that an environmental permit ceases to be valid if the facility for which it is issued does not operate for a period of longer than four years. This means the Ministry should have initiated a process for cancelling the permit, in line with Article 98, paragraph 3, of the same law. Instead, the Ministry extended the permit, in contravention of the law.</p> <ul style="list-style-type: none"> • Foca HPP: Environmental permit issued in 2013. Environmental study did not take the potential cumulative impact of Buk Bijela and Foca HPPs and consultations were deficient. According to Article 5, para. 2 of the Regulation on the process for revision and renewal of environmental permits, (Official Gazette of Republika Srpska, no. 28/13, 104/17), any request for extension of the permit must be submitted at the latest 3 months before its expiry. Considering that the permit expired 07.06.2018, the request would have had to have been submitted by 07.03.2018, but was submitted on 14.03.2018. In spite of this, the Ministry granted an extension of the permit, instead of dismissing the request as untimely. The request also mentions that the construction has not begun. Thus, as with Buk Bijela, according to Article 98. para 1.e. of the Republika Srpska Law on Environmental Protection, after 4 years the Ministry should have initiated a process for the annulment of the permit. • The public consultations in 2012 were not held in line with Republika Srpska's Law on Environmental Protection or the Aarhus Convention, to which Bosnia-Herzegovina is a party. No information about the public consultations was published on the website of the Ministry, nor were the draft environmental impact assessment studies published, which represents a violation of Article 6. paragraph 2 of the Aarhus Convention and Article 39, paragraph 4 of the Law on Environmental Protection. Due to this, the interested public only got to know of the consultation at a late stage, which impacted on their ability to deliver good quality comments or indeed to comment at all. • The Foča plant and especially the Buk Bijela hydropower plant, if built, will also impact on Montenegro, including the UNESCO-protected river Tara. The Espoo Convention therefore requires transboundary public consultation to be carried out. This was done to some extent in 2012, but insufficiently, and was not repeated for the permit renewal. • In late July it was also revealed by Bosnia-Herzegovina business media that no feasibility study has been carried out for the Buk Bijela project yet. It is therefore unclear what information the assessment by the consultants for the Regional Strategy was based on and how they assessed that it is a recommended project. It is also unclear what the economic costs and benefits for the local and downstream communities, Bosnia-Herzegovina and 	<p>ensure that hydropower is developed in compliance with the highest standards of ecological preservation.</p> <p>On specific hydropower plants included in the draft list of projects: The indicative list of projects reflects the results of the assessment undertaken by the team on the basis of data provided by relevant institutions/organisations up to the first quarter of 2017. More details on the process (screening, MCA, expert assessment) and next steps can be found in the general response to comments.</p> <p>On the 2018 fish study: One of the authors (D Zabric) has been part of the Study team as the Fish Expert and has reflected all existing data into the Study and the associated GIS database.</p>
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		Montenegro would be. The upper Drina area has developed small-scale tourism facilities based on rafting and angling which would be heavily impacted by any nearby dams.	
17	MINISTRY OF FOREIGN TRADE AND ECONOMIC RELATIONS OF BOSNIA AND HERZEGOVINA	<p>Cover letter with attachments in local languages, which reiterate, with one exception (Letter below) to comments submitted in February.</p> <p>Letter from ELEKTROPRIVREDA BOSNE I HERCEGOVINE – Sarajevo:</p> <ul style="list-style-type: none"> • Would like to see all the lists included in Annex 2 to the Draft Final Report included on the Indicative list, particularly the following: HPPs: Janjici and Ustikolina. 	<p>Feedback gratefully acknowledged.</p> <p>On specific hydropower plants included in the draft list of projects: The indicative list of projects reflects the results of the assessment undertaken by the team on the basis of data provided by relevant institutions/organisations up to the first quarter of 2017. More details on the process (screening, MCA, expert assessment) and next steps can be found in the general response to comments.</p>
18	COALITION FOR PROTECTING RIVER OF BOSNIA AND HERZEGOVINA	<p>We do not accept statement that “hydropower development is having a strong tradition” as an argument, since we have as a country long tradition in coal exploitation and usage also but EU and international obligations are supposed to halt this usage dramatically.</p> <p>Rivers are at great risk of losing their greatest values, of which the most important are water quality and richness of biodiversity, all because of plans to build a large number of hydropower plants on them.</p> <p>Construction of new hydropower plants in Bosnia and Herzegovina does not guarantee a higher contribution to energy security, due to the effects of climate change and their impacts on the water regime, and small hydropower plants provide extremely low contribution to the energy balance in relation to the damage incurred as a result of their construction and use.</p> <p>Plans for exploitation hydropower potential of Bosnia and Herzegovina under the auspices of the public interest favours breaking the law, personal interests and increasing of corruption.</p> <p>Solar, wind, hydro and biomass energy are considered as renewable energy sources but most of the subsidies that authorities in Bosnia and Herzegovina provide to investors are allocated for hydropower projects.</p> <p>Hydropower is presented as clean energy, but the construction and operation of hydropower plants lead to permanent damage of the environment and the destruction of ecosystems that depend on the river. [...]</p> <p>These environmental damages are paid by electricity consumers through the electricity bills on which funds are allocated for subsidizing renewable energy sources. Having in mind that the entire region is producing almost half of the electricity from hydropower there is strong need for investments in new technologies for renewable energy sources with a goal of diversification of energy production. Wind and solar potential of the region is higher than majority of EU countries where these technologies are already applied.</p> <p>Priority for new Greenfield projects should be investments in to the wind and solar generation instead of new hydropower.</p>	<p>Comments gratefully acknowledged. In its policy dialogue with all Western Balkan partners, the European Commission continuously emphasises the need by countries to calibrate their investments in hydropower generation, in order to achieve the right balance between diversification and security of energy supply an emphasis on renewables, and nature protection. This is done, in particular, in the framework of the Stabilisation and Association agreements and within the Energy Community. We have also made clear that the European Commission will provide technical assistance for project preparation in full compliance with the acquis.</p> <p>For candidate countries and potential candidates, the EU energy and environmental acquis, independently of its transposition status in the region, remains the reference for hydropower development. The EU renewables directive notably states that the assessment, planning or licensing procedures for renewable energy installations should take all Union environmental legislation into account. The European Commission also recently adopted guidance on the requirements for hydropower in relation to EU Nature legislation and the Water Framework Directive. It is based on EU Member States’ experience and good practices of other stakeholders, including private sector and civil society. This guidance is an important tool that we promote to ensure that hydropower is developed in compliance with the highest standards of ecological preservation.</p>

Most of the listed necessary requirements are already listed in the national legislation or various strategic documents. However, in practice all hydropower project are followed with controversial misuse or violation of the laws. When it comes to EIA procedures, payment of concession fees, consultations and inclusion of other parties (another entity, country or even municipality) in the early stages of planning, taking into account climate change predictions etc. all hydropower projects are very far from what they are recommended or obliged to do. Therefore, we hardly can support and understand the concept of “sustainable hydropower development”.

WBIF have to be driven by environmental, social and development goals and in that matters the solar and wind capacities should be strongly supported in the Western Balkan countries. On that way it is expected that balancing of different energy sources could be applied easily and without stranded investments.

The high level of no transparency and corruption in Western Balkan countries, lack of capacities of authorities and low quality of environmental assessments opens space for unsustainable practices in hydropower development.

So far the EU has only partly been able to ensure that EU legislation is applied to hydropower and thermal power projects in the Western Balkans - whether environmental, procurement or state aid.

Given the distant EU accession perspective for most of the countries, and the prioritisation of high level political issues by the EU, the main channel for enforcement of EU acquis has been the Energy Community Treaty.

This includes - among others - obligations to apply the Environmental Impact Assessment Directive, Chapter III of the Industrial Emissions Directive for new plants, the Large Combustion Plants Directive for existing plants, and EU state aid legislation. Recently the Strategic Environmental Impact Assessment Directive has also become part of the Energy Community acquis.

The Energy Community’s ability to enforce legislation has been patchy due to its lack of strong compliance mechanisms.

But in the case of hydropower, most of the relevant EU legislation is in any case missing from the Treaty. Neither the Nature and Habitats Directives, nor the Water Framework Directives are binding on the countries, and none of the countries are hurrying to apply this legislation before EU accession.

The European public banks, the EBRD and EIB, like to see their involvement in projects as helping to plug this compliance gap. However our experience with their involvement in hydropower in the region so far has shown that they also have not been able to ensure that EU standards were properly applied.

This has resulted in a whole series of coal and hydropower projects across the region which are not in line with national and/or EU standards in terms of environmental impact assessment processes, state aid or public procurement. In fact, every coal project across the region for which an environmental assessment has been undertaken is currently being challenged in court by NGOs. Numerous hydropower plants are also being challenged for the same reasons, as we shall see below.

On specific hydropower plants included in the draft list of projects: The indicative list of projects reflects the results of the assessment undertaken by the team on the basis of data provided by relevant institutions/organisations up to the first quarter of 2017. More details on the process (screening, MCA, expert assessment) and next steps can be found in the general response to comments.

On Investments in wind and solar generation as well as the role of the WBIF: Please see responses provided under #5 above.

	<p>In these circumstances, it makes little sense for the EU to support any list of greenfield projects as it lacks the tools to make sure the projects are then further developed in accordance with EU legislation.</p> <p>But it is especially worrying that the EU is considering explicit support for projects such as Buk Bijela and the Morača dams likely to be financed by Chinese, Turkish, and other non-EU banks which have not demonstrated real commitment to upholding EU legislation.</p> <p>[followed by specific comments on proposed hydropower projects in Bosnia and Herzegovina, similar to those made under #16 above] In addition: Inadequate assessment of environmental impacts, especially on the Danube Salmon The Danube Salmon, Huchohucho, is a large fish endemic to the Danube basin. Over the last 100 years it has undergone a massive decline. It is now found only in a few of southeast Europe’s cleanest rivers, and is categorised by the International Union for Nature Conservation (IUCN) as “endangered”.</p> <p>The Drina, together with its major tributaries the Lim and Tara, constitutes the most significant habitat for the Danube Salmon, in terms of habitat length, totalling 30% (553 km) of its Balkan distribution.</p> <p>This fish is highly sensitive to low oxygen and moderate levels of pollution and is a good indicator for river health. Huchohucho is protected under Annex III of the Bern Convention and Annex II of the European Union Habitats Directive as a species of community interest whose conservation requires the designation of special areas of conservation.</p> <p>This means that, if the river was in the EU, the stretches of importance for the Danube Salmon, including the upper Drina, would almost certainly be in the Natura 2000 network of protected areas.</p> <p>Given the species’ sensitivity, Freyhof et al in 2015 concluded that there must be “No hydropower development, including micro-hydropower in rivers holding self-sustaining populations of Danube salmon, including spawning streams”.</p> <p>In addition, the EU Water Framework Directive – which virtually forbids projects that degrade the good ecological status of water bodies - would make it almost impossible for hydropower development to take place on the upper Drina without violating EU legislation.</p> <p>The environmental impact assessment for Buk bijela confirms the presence of Huchohucho in the Drina. It mentions the construction of fish passes and the fact that these have rarely been implemented in the past for economic reasons, but also that it is uncertain whether they are effective for large fish species like the Danube Salmon. It mentions instead the practice of creating artificial spawning areas. However this seems highly unlikely to be effective for a fish which requires well oxygenated, fast-flowing water and low temperatures.</p>	
19	(private developer)	<p>The document states on page 1 that: “In order to add increased capacity to meet growing energy demands (rehabilitation can only maintain but not increase significantly the capacity), some additional new generation plants could be developed across the region. However, most of the prime hydropower sites in the region have</p> <p>Feedback gratefully acknowledged.</p> <p>On the overall purpose of the Study: Please see details provided in Section 1 above.</p>

already been taken. Due to the necessity to preserve the environment, modifications in hydrology resulting from climate change and available water resources, and the challenges for greenfield projects to be financially viable in the current market, only a limited number of projects are likely to materialise.”

The above statement and assumed limited number of possible projects is based on the idea fixe that the suitability of a site for hydropower is largely determined by the availability of high head. This is, for instance, also reflected in Guidance on the requirements for hydropower in relation to Natura 2000 (EC, 2018), where it is stated that “Hydropower facilities are often concentrated in mountainous areas for technical reasons, but have major far reaching effects on both large and small rivers and lakes across all kinds of different regions. In smaller rivers, even a small flow depletion or disruption to natural ecological conditions can have major negative implications for the river.”

Indeed, when assuming conventional hydro power techniques, the availability of suitable high head sites is rather limited in number, and their occupation rate is already high in the Western Balkans. Most existing hydropower plants that currently occupy these sites have been built since the early 1950s, and typically make use of Francis, Kaplan or Pelton turbines. These conventional turbines can run very efficiently, although invasive civil works are required, and typically the impact on the river basin and fish mortality is high.

The designs of these plants were based on maximising yields from the available high head, but with limited eye for the environmental and social effects. The severe impacts of these designs on river and lake ecosystems have been noted, but still sometimes approached the point where no recovery is possible anymore. In addition, many of the still available (high head) sites in the Western Balkans are located in protected area’s (with varying degrees of - assumed - protection). Several planned hydropower projects in protected areas have been cancelled despite their high potentials after civil concerns were raised, and the environmental and social assessments/guidelines of various agencies have been revised to reflect these concerns even more.

There is a very large amount of sites with limited head available in the Western Balkans. These have enormous potentials when properly developed, but are yet unexplored, as typically the conventionally used Francis, Kaplan or Pelton turbines will have low yields. Many developers that work with conventional technologies typically start looking around in search for higher heads. Sites with limited, or even low head, are unexplored as these are falsely believed to have low yields and to be not financially viable. New technological developments have delivered innovative turbines that are cost-effective and are proven to be fish friendly. Several of these innovative turbines with near 0% fish-mortality, are at the brink of entering the market, but are little known by conventional project developers, site-owners and donors. The new technologies create huge potential at the presently allocated sites but also create additional potential on sites unexplored by conventional systems..

Cascading hydropower and Water Resource Management

The proposition with the wide variety of new technologies therefore show more potential sites that can be developed, in a financially and economically sound manner.

On the principles: These are not intended to provide advice on particular technologies/technical solutions. The best available technologies should however be investigated while planning for hydropower developments in line with the sustainability principles proposed by the Study.

On specific hydropower plants included in the draft list of projects: The indicative list of projects reflects the results of the assessment undertaken by the team on the basis of data provided by relevant institutions/organisations up to the first quarter of 2017. More details on the process (screening, MCA, expert assessment) and next steps can be found in the general response to comments.

In addition these new technologies provide an answer to the growing social and ecological focus, at a sufficiently large scale.

Understanding that the WBIF instrument is focussing on large scale hydropower plants, our suggestion is that - after for instance the example of the Vardar Valley Project in Macedonia - cascading several hydropower plants - can avoid the use of technologies with a high negative impact on the environment while still operating at a large scale. A cascaded system will be less intrusive and will easier comply with the highest standards of ecological preservation.

Fish friendly turbines will avoid high fish mortality, while the cascades will allow fish migration, and the ecosystem remain vital. The cascaded systems do not require (large) buffer systems (lakes) avoiding additional ecological impact on the land-based ecology around the river. Still, the overall yields of the cascaded system will be high.

The electronic regulation system of the turbines can be used to regulate the waterflows, and thus can be embedded in an integrated water management system. The water management system can be part of the river management system, assuring water security and water safety for communities.

In line with the section on integrated water resource management on page 2, cascaded hydropower can be excellently embedded in water management systems and used for flood protection. The Drin - Coordinated Action for a Sustainable Future project implements several actions in the extended Drin River Basin that are focussed on the management of a complex cross-border hydrological ecosystem with many hydropower plants.

Since in a cascaded system the facilities are geographically dispersed, flood risks at extreme water quantities, as are being encountered in an increasing rate, are lower and evenly spread. Also, this geographical dispersion of the cascades allows involving communities in the development and operation of the sites, and even the use of a lengthman scheme with locally employed maintenance crews. This increases the social accountability towards citizens, and increases ownership and sustainability of the assets created.

A cascaded system requires an integrative approach assuring a cost effective and fish friendly operation of the turbine, as well as water safety and water security in the catchment area. In line with the section on transboundary cooperation, territorial cooperation will benefit from concerted solutions involving all relevant parties and bodies. This is the main concern of organisations involved in water management and ecology.

In conclusion, we propose that the principles for sustainable hydropower development in the Western Balkans are amended with paragraphs on:

- the increased potentials of low head hydropower when selecting sites; the increased potential can be made possible with the use of new technologies;
- the possibilities for the application of innovative turbines that are fish-friendly;
- the application of cascades of hydropower plants to avoid negative environmental impact on the river and its surrounding land areas; whilst maintaining scale of operations;

		<ul style="list-style-type: none">- the use of energy generation as an instrument for river basin (water) management and flood protection in a transboundary situation;- if possible; amendments to the shortlisted projects with respect to the above arguments.	
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