



**save
the rivers
coalition**

Comments on

the EIB Environmental, Climate and Social Guideline on Hydropower Development

Submission by Save the Rivers Coalition¹

Save the Rivers Coalition welcomes the European Investment Bank's initiative to formulate clear guidelines for potential hydropower developers. In view of the numerous negative impacts that hydropower projects generate, many of which are mentioned in the draft Guideline text, it is imperative to clarify the requirements for such projects. The draft text offers a starting point, but it can be improved in many ways to fully achieve its purpose.

General remarks

The Framework Water Directive states in its preamble that "*Water is not a commercial product like any other but, rather, a heritage which must be protected, defended and treated as such.* Hydroenergy can be reconciled with the objectives of FWD only in rare, specific conditions such as artificial canals, sewers or derivative channels on fishless rivers. Elsewhere, hydropower development exerts major adverse impacts on biodiversity and undermines the objectives of the WFD. According to the European Environmental Agency, only 40% of surface waters in the EU are in good ecological condition, and hydromorphological pressures, including barriers on rivers, are among the main reasons for that.² Moreover, dam reservoirs are significant emitters of methane, a potent greenhouse gas contributing to climate change.³ Experience shows that hydropower projects cause irreversible damage to rivers, and freshwater dependent ecosystems. Financing dams and hydropower means participating in

¹ Save the Rivers Coalition (Koalicja Ratujmy Rzeki) is an informal grouping of Polish environmental organisations campaigning for the conservation of rivers, streams and wetlands. For membership, see: www.ratujmyrzeki.pl

² EEA, European Waters. Assessment of status and pressures, <https://www.eea.europa.eu/publications/state-of-water>

³ Deemer B.R., Harrison J.A., Li S., Beaulieu J.J., Derlsonro T., Barros N., Bezerra-Neto J.F., Powers S. M., Dos Santos M.A., Vonk J.A. 2016 Greenhouse gas emissions from reservoir water surfaces: a new global synthesis. *BioScience*, 66, 949-964.

the ecocide of rivers and their inhabitants – at a time of a grave global environmental crisis. Investors may be driven by greed and self-interest but that does not mean that public money should support the destruction of nature while there are less harmful ways to produce energy.

Hydropower also often entails negative social effects such as loss of ecosystem services and livelihoods, water conflicts and human rights abuses, bringing irreversible damage to local communities while benefitting only select individuals. It is therefore essential for the EIB to ensure that hydropower projects get financed only if there are no alternative ways to generate energy and if the hydro projects are fully supported by the local communities.

Hydropower is not a solution to climate change

While hydropower is indeed the largest source of renewable energy globally today, it is important to recognise that the reasons for that are historical – first hydropower plants were built in the late 19th century, when today's rapidly developing wind and solar power generation did not exist. **Today, hydropower cannot be regarded as the renewable energy source of choice because of its social and environmental impacts, including its considerable methane emissions, due to which it can hardly be recognised as 'clean energy', as well as the operational risks related to climate change (prolonged droughts affecting river water levels, rising risk of extreme torrential downpours and flooding which may affect the safety of dams⁴).** With the costs of other technologies such as wind power continuing to decline, and the with the EIB bound by the Energy Efficiency First principle, the Guideline Preamble should not imply that hydropower is some kind of key to 'low carbon development'. It is a technology that historically had its role but is now facing a challenge from ever more cost-effective, more sustainable and socially less intrusive new methods of energy production. The Guideline should clearly state that since avoidance of adverse environmental impacts is at the top of the mitigation hierarchy under EU legislation, **project promoters should consider other renewable technologies, energy efficiency improvements and smarter grid integration when analysing project alternatives.**

Strategic approach is crucial

The EIB should recognise that project promoters are usually business companies whose primary objective is to generate profit, and that since large publicly-funded projects are good opportunities for profit-making, there is an incentive for project promoters to propose such projects even if they do not serve any public interest (while generating substantial environmental and social costs). For the same reasons, hydropower projects are likely to attract and create opportunities for political corruption. The end result is very likely to be projects that only benefit individuals while causing irreversible damage to local communities, rivers, and freshwater dependent ecosystems.

For this reason, EIB should only consider projects that are firmly embedded in strategic documents (of verifiably good quality). This means not only River Basin Management Plans

⁴ <https://www.bbc.com/news/world-africa-44065340>

or equivalent documents, in the context of which the projects' cumulative environmental impacts on the river basin should be assessed, taking into account all existing and planned projects in the river basin, both large- and small-scale. Projects to be financed by the EIB should also be embedded in relevant **energy strategies**. In view of the significant environmental and social impacts of hydropower, potential investors should get a clear signal from the Guideline that **projects to be financed by the EIB need to be justified in the context of national energy strategies and, in the EU, also the regional capacity assessments proposed under the European Union's Clean Energy Package.**

Need for enforceable commitments and sound provisions on information disclosure

Leaving the implementation of the Guideline to the investor creates a risk. Without strong controls, project promoters can always prove no negative impacts. For this reason, the EIB should make it clear to investors what will not be accepted and that they will be required to provide strong science-based evidence for their claims. Instructions for project promoters must be zero - one. Recommended activities such as post-construction monitoring will not change anything and in particular, will not prevent dubious projects such as the large dam and reservoir built in Poland on the pretext of supplying water to non-existent steelworks, something that should never happen as each dam equals a destroyed river, extermination of fish and other organisms.

The Guideline contains many requirements and recommendations for project promoters to provide information and evidence about the impacts and effects of the proposed projects. Our experience shows that in practice, enforcing compliance with the project promoter's commitments is difficult, and weak provisions on information disclosure are a major obstacle hindering enforcement. **The Guideline should therefore include clear language about the detailed information disclosure requirements that the project promoter would be required to meet during project preparation, implementation and operation.** In particular, all the documents that the project promoter is required to submit to demonstrate that it meets the requirements should be subject to strong information disclosure rules.

Moreover, as providing evidence that the project meets all the requirements is costly and time-consuming, the EIB might help potential project promoters avoid unnecessary costs and efforts **by identifying a limited number of key requirements against which all potential projects could be tested before the project promoter undertakes the effort of demonstrating compliance with all the 60+ requirements.** In our view, such key requirements should concern **demonstrating the existence of overriding public interest** under Art. 4(7) of the WFD for all new hydropower plants, both large and small. Regarding the interpretation of this term, reference should be made to the guidelines for the application of Article 6 of the Habitats Directive [European Commission, 2007]. Overriding public interest is the single most important cut-off criterion because in view of the Art. 4(7) of the WFD and Art. 6 of the Habitats Directive hydropower projects can meet it only in exceptional circumstances.

The existence of overriding public interest should be examined in the context of not only River Basin Management Plans, but also relevant strategic and planning documents concerning energy. It should not be assumed that simply installing some renewable capacity serves a public interest – other renewable technologies should be considered as alternatives, as well as energy efficiency improvements and better grid integration in line with the Energy

Efficiency First principle. In making this determination, the cost of lost ecosystem services should also be factored in.

Equally importantly, projects promoters should be required to demonstrate early on that they have the support of the communities to be affected or concerned by the project.

Length and level of detail in the Guideline

The EIB's ambition is to produce a document that will not be excessively long and burdened with too much detail. However, it would be wrong to leave out important aspects just to fit into an arbitrarily determined size limit – especially if the purpose of the document is to provide clarity to project promoters.

Detailed comments

Introduction

I Preamble.

<p>Hydropower is currently the largest source of renewable power worldwide, and therefore an important contributor to low-carbon “clean development”.</p>	<p>This statement is misleading. Hydropower is currently the largest source of renewable power worldwide for historical reasons (the technology has been around for more than a century) but it is not the most sustainable technology available today. Hydropower is not clean energy because of methane emissions, in some cases generating climate impacts greater than coal power stations. It is also a technology with very significant adverse impacts on biodiversity, with the 50,000+ dams listed in the World Register of Dams bearing much of the responsibility for the loss of wildlife in aquatic ecosystem experienced over the last century.</p>
<p>EIB will promote best practice mitigation of environmental and social impacts and risks.</p>	<p>Effective mitigation of the environmental impacts of barriers and impoundments on rivers is a figment – such structures change the hydromorphology of rivers to an extent that can never be fully mitigated. The Guideline should make clear reference to the EU environmental rules under which</p>

	avoidance of adverse environmental impacts comes first, and to the Framework Water Directive objective of improving the ecological status of waters. It should instruct project promoters to consider more sustainable alternatives in the case of new hydropower projects, and decommissioning and river continuity restoration in the case of existing ones.
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Applicability of Guideline

Box 2. Hydropower-specific questions for intermediaries

Is the project shown in the plan (RBMP) or planned to be included in the next version?	The text “planned to be included in the next version” should be deleted.
	<p>The questions for identifying sensitive projects and triggering direct EIB involvement in appraisal should also include the following:</p> <p style="padding-left: 40px;">Does the dam interrupt the continuity of the river for anadromous and potamodromous fish?</p> <p style="padding-left: 40px;">Does the dam create hydropeaking?</p> <p style="padding-left: 40px;">Does the dam create thermopeaking or does it change the thermal regime of the river below?</p>
	The Guideline should also include provisions on disclosure of information in projects financed by intermediaries.

III. Policy Environment

Site selection for hydropower projects can benefit from the early assessment of key potential impacts and risks, including eutrophication, greenhouse gases, cultural heritage and resettlement.	Add: biodiversity impacts, in particular related to river continuity and habitat degradation, and ecosystem services, especially availability of clean water
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	upstream and downstream from the project.
Flowchart on p. 5	The Guideline needs to clarify that the FWD decision-making process presented in the flowchart represents the EIB's policy in selecting projects to be financed.

2 Environmental Issues and Impacts

All hydropower projects financed by EIB must meet the Environmental and Social Standards, and more specifically Environmental and Social Standard 3: Biodiversity and Ecosystems.	A reference to Environmental Standard #2: Pollution Prevention and Abatement should be included in the Guideline. Pollution in the context of hydropower is not limited to reservoir water quality. Significant pollution risks also arise during the construction phase, especially turbidity. Also, in the context of availability of clean water, it is worth bearing in mind the self-purification capabilities of free-flowing rivers, which dam reservoirs undermine.
Opportunities for ecological restoration and enhancement should also be considered wherever possible in accordance with WFD objectives, for example with respect to hydropower rehabilitation projects.	The wording here needs to be stronger and mention avoidance of negative impacts as a priority, as well as adequate consideration of non-hydro alternatives serving the same objectives.

II. Downstream Hydrology and Limnology (including Environmental Flows)

	Environmental Flows cannot be reconciled with hydropeaking.
7. All hydropower projects financed by EIB must assess and make provision for an appropriate downstream environmental flow release (EFR) and any additional mitigation measures that may be required (at a minimum these would normally include measures for fish passage) in order to maintain the current status of freshwater and estuarine ecosystems and support existing socio - economic uses of the water resource. These measures must meet	The following requirements should be added: 7a. The project promoter must demonstrate how sediment retained in the reservoir will be transferred below the dam in order to reduce and/or eradicate deep-seated erosion. 7b. The project promoter must prove that thermopeaking and alteration of the

<p>national legislative requirements, but in many cases will require additional features such as varying flow releases at different times of year in response to seasonal habitat requirements, or the periodic release of flood pulses (freshets) to promote downstream sediment or nutrient transport.</p>	<p>thermal regime will not affect fish and macroinvertebrate below the dam/weir.</p> <p>7c. The project promoter will provide evidence that all the potamodromic and anadromous fish can migrate up and down the river, and those that have entered the dam reservoir do not become homeless fish. The project promoter will provide evidence that fish from the tributaries of the dam reservoir can exchange genes and the reservoir does not genetically isolate them.</p>
<p>11. For projects located in EU member states or candidate countries (depending on their transition agreements), the above EFR must support the achievement of good status in the affected water bodies (or good potential in the case of HMWBs) as defined in the RB MPs prepared under the WFD, and ensure that no deterioration in status occurs (unless explicitly approved under the Article 4(7) process – see Box 3). The EFR must also ensure compliance with any additional standards or objectives for water bodies that form part of a Natura 2000 Network.</p>	<p>Cf. the requirements of point 7a, 7b, 7c. The project promoter should be required to prove that the project objectives cannot be achieved by more friendly methods such as wind energy and other renewable technologies, energy efficiency improvements or smarter grid integration.</p>
<p>12. The EFR regime must include a continuous programme of monitoring (including both flow and biological indicators), evaluation, and adjustment - commonly referred to as adaptive management - so that it can be periodically reviewed and where necessary modified in response to increased understanding or changes in downstream ecosystem or socio-economic conditions.</p>	<p>Add: In particular, hydrological data must be recorded automatically and kept for inspection for 3 years.</p>

III. Reservoir Water Quality and Sedimentation, including Eutrophication

<p>14. [...] Mitigation measures may include vegetation clearance prior to inundation,</p>	<p>The proposed mitigation measures have doubtful effectiveness.</p>
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nutrient flushing and/or upper watershed management measures.	
<p>15. In cases of large reservoirs with potentially long water residence times (of the order of several months or more), i.e. where there is a significant risk of seasonal thermal stratification, it is recommended that a detailed reservoir water quality assessment is carried out using hydrodynamic (rather than empirical) modelling approaches to assess and mitigate the risks of eutrophication and/or accumulation of pollutant.</p>	<p>Change status to “required”. The project promoter should be required to determine the risk of the reservoir getting littered with plastic rubbish and other waste, and define a way to clean up the reservoir. The duration of anoxia and the release of Mn and Fe from bottom sediments and their discharge into the river must be assessed, both during stratification period and in winter. The project promoter should be required to provide a solution to the Mn and Fe discharge in toxic concentrations downstream.</p>
<p>16. All storage-based hydropower projects with large reservoirs must include an assessment of existing and potential future reservoir sedimentation, with ongoing monitoring of sediment influx throughout the reservoir life (see also 54).</p>	<p>The project promoter should be required to provide the river downstream of the dam with sediment in the amount and quality equal to the retained sediment. This should be included in the project business plan.</p>
<p>17. It is recommended that an ongoing programme of reservoir water quality monitoring is undertaken post-construction.</p>	<p>A post-construction program of reservoir water quality monitoring focusing on water quality parameters identified during the E(S)IA will not change anything if water quality issues arise. It is difficult to enforce adequate corrective measures post-factum and adequate and effective measures to prevent reservoir water quality issues should be incorporated at earlier stages of the project. Post-construction monitoring should then be required, not just recommended.</p>

3 Social Issues and Impacts

<p>Nonetheless, hydropower projects also have a potential to mitigate some of the mentioned adverse impacts by serving as sources of residential or commercial electricity for resettlement areas, as sources of employment, or as sources of</p>	<p>This sentence should be removed as it blatantly overstates the social benefits of hydropower. Firstly, residential and commercial electricity can be generated using other methods that do not cause the massive social disturbance involved in</p>
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<p>revenue earmarked for development activities in affected communities.</p>	<p>hydropower projects in the first place. Moreover, while hydropower projects are typically large corporate undertakings with profits controlled by entities from outside the given community, other renewable technologies make possible smaller, community-owned projects that make a much better contribution to community development than vaguely defined and unenforceable 'benefit sharing schemes', without causing the displacement, social disruption and loss of livelihoods and access to vital ecosystem services.</p>
<p>21. Promoters must identify all communities and/or other groups that might be affected and undertake informed and meaningful stakeholder consultation with them from the early stage of the project development and preferably during pre - feasibility stage, throughout the area affected.</p>	<p>Given the scale of social disruption that hydropower projects are likely to cause due to involuntary displacement, loss of traditional livelihoods and loss of access to ecosystem services, affected communities should have a say not only in managing the fallout, but also in deciding whether the project will go forward or not. The way requirement 21 is positioned in the text, under the heading of <i>Physical and Economic Displacement and Loss of Access</i>, implies that the consultations in question will concern ways to manage the displacement, and not the decision whether or not to implement the project. This requirement should sit under a separate heading of Information Disclosure and Consultation, which should clearly state that affected communities have a right to say no to the project.</p>

V Ecosystem services

<p>46. The promoter must ensure that ecosystems services review is included in the terms of reference for E(S)IA of all hydropower projects. The terms of reference will specify that if the review indicates it is required, an ecosystem services baseline must be prepared, priority services identified, and mitigation measures developed for impacts on those services.</p>	<p>Prior to discussing mitigation measures, project promoters should be required to provide a credible valuation of the cost of ecosystem services that will be lost / impaired as a result of the project. The project benefits and justification for the project should be considered against that cost. If development of mitigation measures is</p>
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Associated facilities must be considered in the assessment.	only required for priority services, clear criteria need to be included in the Guideline for deciding which ecosystem services are priority services.
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4 Climate Resilience and GHG Emissions

I Factoring Climate Change into Hydrological Assessment

50. It is recommended that the above CRVA includes the development of a representative hydrological model of the catchment. The model should be run for a suitable range of future climate scenarios to estimate changes in the net runoff from the catchment based upon input climate data and physical catchment characteristics.	This should be required. The prolonged droughts which are likely to occur more often due to climate change may turn hydropower projects into stranded assets if the hydrological scenarios for the catchment are not adequately taken into account.
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III Reducing Reservoir GHG Emissions

	In view of the new research findings on methane emissions from reservoirs, new hydropower projects should not be considered for financing where zero-emissions alternatives exist. The Guideline should require project promoters to credibly demonstrate that no less carbon-intensive alternatives exist.
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5 Strategic and Basin-Wide Issues

58. In line with the requirements of Standard 1 (and the EIA Directive) for analysis of alternatives, within the E(S)IA the promoter must : a) evaluate decommissioning as an alternative option when rehabilitation of an existing hydropower project is considered , and present a robust justification for the option selected; and b) justify proposals for a new,	Point b) seems to assume that the project promoter approaching the EIB with a new greenfield project will also own/control existing plants in the same basin. This is not always the case. Clarification is needed for situations where old hydropower projects exist but are not owned, operated or controlled by the project promoter. In any case, both new projects and
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<p>greenfield hydropower project in river basins where old hydropower projects exist against the alternative of rehabilitating or refurbishing those existing hydropower plant(s).</p>	<p>rehabilitations of existing plants should be compared against the alternative of non-hydro renewable projects. Also, they should only be considered for financing if they are embedded in and justified by relevant energy strategies.</p>
<p>59. It is recommended that strategic studies are conducted at the earliest possible stage during project planning such that the optimal balance between financial return and environmental and social costs can be achieved between different hydropower options in a river basin or region. Strategic and system - wide planning tools are emerging to support this integrated assessment and scheme optimisation process to be carried out (e.g. TNC 's Hydropower By Design approach 11). The aforementioned CIS Guidance Document No. 1 also provides detailed guidance on economic analysis in support of integrated water resources planning</p>	<p>This should be required and the options to be included in such a study should not be limited to different hydropower projects in the same river basin. Other renewable alternatives should also be considered, which do not have to be located in the same river basin – the analysis should aim at identifying the best solution to the given area's energy needs, not the least harmful hydro project.</p>

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