

Consultation to Draft CIS Guidance on Sediment Management

A Eurelectric response paper

Eurelectric represents the interests of the electricity industry in Europe. Our work covers all major issues affecting our sector. Our members represent the electricity industry in over 30 European countries.

We cover the entire industry from electricity generation and markets to distribution networks and customer issues. We also have affiliates active on several other continents and business associates from a wide variety of sectors with a direct interest in the electricity industry.

We stand for

The vision of the European power sector is to enable and sustain:

- A vibrant competitive European economy, reliably powered by clean, carbon-neutral energy
- A smart, energy efficient and truly sustainable society for all citizens of Europe

We are committed to lead a cost-effective energy transition by:

investing in clean power generation and transition-enabling solutions, to reduce emissions and actively pursue efforts to become carbon-neutral well before mid-century, taking into account different starting points and commercial availability of key transition technologies;

transforming the energy system to make it more responsive, resilient and efficient. This includes increased use of renewable energy, digitalisation, demand side response and reinforcement of grids so they can function as platforms and enablers for customers, cities and communities;

accelerating the energy transition in other economic sectors by offering competitive electricity as a transformation tool for transport, heating and industry;

embedding sustainability in all parts of our value chain and take measures to support the transformation of existing assets towards a zero carbon society;

innovating to discover the cutting-edge business models and develop the breakthrough technologies that are indispensable to allow our industry to lead this transition.

Dépot légal : D/2021/12.105/31

WFD SEDIMENT: DOCUMENT FOR RECORDING REVIEW COMMENTS

¹MEMBER STATE: EURELECTRIC

²REVIEWERS: CLAUDE PUTAVY, JEAN-RENE MALAVOI, EMMANUEL BRANCHE

³ Person	⁴ Chapter	⁴ Page	⁴ Line	⁵ Comment	Proposed change
Eurelectric			0	We applaud the work of quality done by the Commission, the core group and designated experts on this complex project. The guidance document seems to us well balanced and useful for users. It gives the necessary information and actions that need to be covered when establishing an ISMP. Of course, as the matter is complex, the contributions of specialists of different field is of great importance to build a relevant and effective ISMP.	You'll find bellow our detailed comments on the document
Eurelectric			16	Typo correction for a First name "Emanuel" should be replaced by "Emmanuel"	Contributing authors: ..., Emmanuel Branche, ...
Eurelectric			45-48	It is stated that this Guidance Document comes in time to be reflected in 2021-2027 RBMPs – however by now (mid-2021) substance of RBMPs is largely prepared. Propose to adjust the text with some deletions.	Proposed new text: This document was produced with Member States, and they are expected to consider the extent to which the recommendations in this guidance can be included in the context of the 3 rd RBMPs and in subsequent steps.
Eurelectric			53	technical studies need to be done by specialists	Add: warning: technical studies need to be done by specialists in hydromorphology, chemistry, ecotoxicology, freshwater and marine biology
Eurelectric			213-214	Statement "key role of hydromorphology and thus of a near-natural sediment regime": Concern that a very high level of ambition is implied as a standard requirement.	Propose to add a short explanation of the role of hydromorphology as a supporting quality element, and the WFD applies detailed procedures to determine high and good status / maximum and good potential for water bodies.
Eurelectric			216	Replace "the construction of hydropower plants" by "the construction of dams" as many dams were built in Europe for other purposes than power generation. Furthermore massive past gravel extraction in the river channels have also impacted the rivers ...	(including the construction of dams, expansion of agriculture, large scale river regulation, gravel extraction, and dredging for navigation, aggregate extraction and flood prevention)

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Eurelectric			314, 771,	“beside hydropower dams” - most dams were built for other purposes, see 216.	“beside dams” (delete word “hydropower”) Please also adjust in other instances (line numbers mentioned in column 4)
Eurelectric			361	Sand could be bedload	in sand bed river, sand is the bedload and can be more than 50% of the total sediment yield (Turowski et al. 2010)
Eurelectric			376		Insert after “check-dams and bank protections” : and mostly gravel mining in the river beds themselves or their adjacent floodplain
Eurelectric			428	It may be important to explain somewhere in this § that dams should also allow fine sediments to move downstream if possible. However, they are often asked by the authorities to ensure the continuity of coarse sediments...and to trap the fine ones...	
Eurelectric			554	Perhaps a few introductory words on the fact that studies show that pollutants will preferentially settle on the very fine sedimentary fraction, i.e. clays, due to their particular electrostatic properties. (Scordia, 2008) and to a lesser extent on silts, or even the finest fraction of very fine sands (<0.08 mm, which is also the lower limit of granulometric measurement by sieving according to standard NF P 94-056).	
Eurelectric			601		In place of : “ <i>in order to allow</i> ”, write : “ <i>because of</i> ”
Eurelectric			670	“... the risk of not achieving good status” – ignores category of HMWB / AWB – add “or potential”.	Add “or potential”, so sentence should end “... the risk of not achieving good status or potential”.
Eurelectric			678 - 703	Good Ecological Potential (GEP) is not mentioned, only good status which applies to natural water bodies.	Instead of adding it every time, include a sentence at the beginning of this segment that all explanations also apply for HMWB / AWB = good ecological potential.
Eurelectric			741	text does not reflect GEP	Add explanation that all aspects also apply for HMWB / AWB (or, if there are differences, they should be explained explicitly)
Eurelectric			759	“... REFORM recommends that hymo assessment methods are used in ecological classification (see below).” Link “see below” is unclear, “REFORM” (what is that) not mentioned again in the document.	Add detailed explanation on REFORM. In general, hymo quality elements have a supporting role to BQEs.

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Eurelectric			768	“An inspection or walkover survey may identify atypical scour or erosion” – we disagree. You need to be an expert to identify by a simple qualitative observation in the field the signs of sediment deficit or excess (fine and coarse sediments)	
Eurelectric			779	Maybe important to provide additional information on “dredging” and ‘dredging & disposal’ or add “dredging & recovery” (Table 2.1): River or coastal engineering works do disrupt sediment continuum and reduce sediment supply downstream in many cases, but not generally. Dams and weirs with an appropriate design and the implementation of good sediment management facilitates the passage of sediments towards downstream.	Replace “hydropower plants” by “dams” Add information of “dredging & recovery”
Eurelectric			791	We don’t understand the sentence: “Sediment quantity is fundamental to how many aquatic habitats function naturally”.	
Eurelectric			868	Typo: “even more is sediment input...”	change “is” to “if”
Eurelectric	2.3.1	32	976	Add “dams” in general as most of the dams in the world have several purposes, and 3/4 of large dams in the world don’t have power as one of their purpose ... it is relevant to add	“Sedimentation of reservoirs is one of the key future issues for sustainable hydropower and dams development”
Eurelectric			990	We don’t agree with the sentence “Mining or dredging sediments from river beds can <u>sometimes</u> have a similar downstream effect”. In most European rivers (and even more widely in the world), this generalized incision is due to massive gravel extraction in the river channels between 1945 and the end of the 1980s.	Change the sentence to really reflect the impact of mining or dredging.
Eurelectric			1113		After “interrupted by dams” write : “or definitively removed from the system by gravel mining”
Eurelectric			1121		After “to restore sediment balance” write “or mitigate the imbalances”
Eurelectric			1154	It seems fundamental to distinguish from the very beginning of this chapter between fine and coarse sediments	
Eurelectric			1185		After “are usually scarce” write: “particularly for coarse sediments”. It’s much easier to find data on fine sediments.

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Eurelectric			1265		Between “the accuracy” and “empirical” “of” is missing
Eurelectric			1400	Warning: overlapping of classes Coarse/fine. Is this intentional?	
Eurelectric			1448		Write somewhere : <u>warning</u> : bed load measurements are much more complex and costly than suspended sediments measurements
Eurelectric			1641	Green-blue infrastructure: concept might be understood differently in different contexts (stakeholder groups, member states, sectors). Propose to provide a definition and/or footnote to a policy or technical document.	Propose to provide a definition and/or footnote to a policy or technical document.
Eurelectric			1654, Table 2.6	The table is very useful, but would be good to exactly define and differentiate the three concepts of venting, sluicing and flushing	Add definition / description of the three concepts of venting, sluicing and flushing (also possible through reference / link of course)
Eurelectric			1767	Indicate that the sediments concerned are only fine sediments. If possible, give the relevant size class (except if line 554 is corrected in this way)	
Eurelectric			1772	“substances of emerging concern”	Replace by CECs (Contaminants of Emerging Concern)
Eurelectric			1819	Table 3.1 should be completed	Add in the first also all urban contamination (e.g. urban treated wastewater, combined sewer overflows, urban runoffs with accumulation of CECs in downstream sediments).
Eurelectric			1837-1840	“... all European waters should reach good status” – add good potential for HMWB / AWB to this para, should be properly represented	add good potential for HMWB / AWB to this para
Eurelectric	3.3.2		1892-1915	Quite a lot of overlap between chapters 3.3.2 and chapter 1.5	Can be addressed in editing process of whole document
Eurelectric			1935	Fig 3.1: Why is there no blue arrow to link the secondary receptors to direct receivers?	Add missing arrows

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Eurelectric	3.3.2	66	1965	Not sure the listed contaminants are the main contaminants, or if they are the main searched contaminants in sediments. Indeed, there is many studies about the presence of contaminants of emerging concern in sediments. (e.g. : - drugs: Thiebault, T., Alliot, F., Berthe, T., Blanchoud, H., Petit, F., & Guigon, E. (2021). Record of trace organic contaminants in a river sediment core: from historical wastewater management to historical use. <i>Science of the Total Environment</i> , 773, 145694. - alkylphenols: Fenet, H., Gomez, E., Pillon, A., Rosain, D., Nicolas, J. C., Casellas, C., & Balaguer, P. (2003). Estrogenic activity in water and sediments of a French river: contribution of alkylphenols. <i>Archives of environmental contamination and toxicology</i> , 44(1), 0001-0006. - ...)	Replace : “the main contaminants that associate to” by “the contaminants that are known to associate to” And add some references.
Eurelectric	3.3.2	66	1969	Cf previous comment, drugs and alkylphenols should also be considered as contaminants of emerging concern.	Add “Drugs, alkylphenols,..)” after “(e.g. PFAS”
Eurelectric	3.4	68	2013		Add “and their interactions (synergy, antagonism, additivity..)” after “mixtures of contaminants”
Eurelectric			2079	Ecological status	this section should also include and reflect ecological potential
Eurelectric	3.5.2	71	2129	“substances of emerging concern”	Replace by CECs (Contaminants of Emerging Concern)
Eurelectric	3.5.3	72	2203	“By definition, a quality standard is legally binding” = Not sure this assertion is true, these terms may be used differently in different sectors or members states. Is there by definition a link between quality standard and legal obligation? This need to be checked or the sentence could also be less affirmative.	Replace “By definition” by “Often” or “Usually”
Eurelectric	3.5.3	73	2216	SQGs = This is not defined before in the document	Add “(sediment quality guidelines)” after “SQGs”
Eurelectric	3.5.3	73	2218	Add MacDonald et al., 2000 = very often used as a reference MacDonald, D. D., Ingersoll, C. G., & Berger, T. A. (2000). Development and evaluation of consensus-based sediment quality guidelines for freshwater ecosystems. <i>Archives of environmental contamination and toxicology</i> , 39(1), 20-31.	After “de Deckerere et all. (2011)” add “MacDonald et al. (2000)”
Eurelectric	3.5.3	73	2219	This para is about the TEC and PEC values of “several substances” = it would be interested to be more specific on which substances or at least family of substances the TEC / PEC were derived.	Be more specific in this para by giving the names of the substances or at least the families of contaminants

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Eurelectric	3.5.3.	73	2224	Editorial = problem in the sentence	Check the sentence
Eurelectric	3.5.3	73	2226	"Member States may establish EQS for sediment at national level and apply those EQS instead of the EQS for water set out in the Directive". Is it instead of or rather in addition to?	Check the accuracy
Eurelectric	3.5.3	73	2244	"When sediment is the primary source of exposure for target species (macrophytes, fish or mammals), a quality standard for contaminant in sediment for such substances should be derived from the quality standard for contaminant in biota. " Is it a provision of the WFD or is it from the guidance doc 25?	Specify in the sentence the origin of the provision to derive a quality standard in this case.
Eurelectric	3.6.3	76	2332	Why use sanitary criteria when all the guidance deals with environmental impacts?	Think of having criteria addressing environmental issues instead of sanitary issues.
Eurelectric			2341	Table 3.2 is very useful, but would be good to describe "local capping" in some detail, similar to the other techniques e.g. environmental dredging	describe concept of "local capping" (and/or provide references / links)
Eurelectric	3.6.4	78	2363	In table 3.3 no difference is made between mature techniques and techniques under development. It could be very useful for the user of the guide to specify the level of maturity of each technique.	Add a column giving the status of each technique related to its maturity, i.e. still on development or already industrialized.
Eurelectric	3.4.2	78	2363	In table 3.3: a column of effectiveness is given. However effectiveness depends on the nature of the contaminant.	Specify the contaminant targeted by each technique and the effectiveness for this contaminant (or family of contaminants)
Eurelectric	4.1	80	2392	The sentence "Public participation plays an important role ...stages of the process" may be removed. Indeed Public participation is essential but as other stakeholders participation (maybe no mandatory to highlight this ... in the introduction as it is not developed in a special way in the next paragraphs).	Proposition to remove lines 2392 and 2393
Eurelectric	3.4.2	79	2368	In table 3.3.b it is proposed to add specific mixtures to the contaminated sediments = ie add chemicals in the environment to degrade other chemicals => How to deal with the toxicity of the added substances of their degradative products?	Maybe add a column advantage / disadvantages of each technique or at least application limits of each technique.
Eurelectric			2788	repeat the warning from page 53	

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Eurelectric	4.5	93	2821	Add 'gravel extraction' for pressures/drivers	Activities having impact on sediment quantity in the water body / river basin: water related uses (hydropower, navigation, recreation, flood or erosion control, nature conservation, etc.), activities in the catchment area (land use, gravel extraction, topographical relief in the catchment area, agriculture, ...)
Eurelectric			2904	Is it interesting/possible at this stage to provide examples of more precise indicators: ex: riverbed substrate : size classes, surface occupied, thickness etc. NB: this joins aquatic habitats ex: surface of gravel for fish spawning, or: presence of favourable flow facies (glides, run, riffle etc.)	
Eurelectric			3151		After "measures and actions " write : and even sometimes, objectives themselves (there is an arrow to step 3 of the flowchart):
Eurelectric			3166		After "in the timeline" : write : or if the objectives themselves need to be reassessed and revised
Eurelectric		Case study 3.2	3640	Important to mention for this case study dedicated to the Rhine river that HCB pollution is linked to an industrial event (chemical spill of Sandoz, Schweizerhalle). This had a tremendous impact for all downstream sediments, ICPR is clearly engaged in this issue	

¹ Please enter your member state

² Please enter reviewer name, initials, and organisation

³ Include reviewer initials for each line

⁴ Specify chapter, page and line/figure number

⁵ Please describe the issue and provide a justification for any proposed change in the next column

Eurelectric pursues in all its activities the application of the following sustainable development values:

Economic Development

- Growth, added-value, efficiency

Environmental Leadership

- Commitment, innovation, pro-activeness

Social Responsibility

- Transparency, ethics, accountability



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