

**Committee for Risk Assessment (RAC)**  
**Committee for Socio-economic Analysis (SEAC)**

Opinion

on an Annex XV dossier proposing restrictions on  
Creosote and Creosote-related substances

**ECHA/RAC/RES-O-0000007346-71-01/F**

**ECHA/SEAC/RES-O-0000007386-67-01/F**

**1 December 2023**

**RAC**  
COMMITTEE FOR RISK  
ASSESSMENT

**SEAC**  
COMMITTEE FOR  
SOCIO-ECONOMIC ANALYSIS

OPINION ON AN ANNEX XV DOSSIER PROPOSING RESTRICTIONS ON  
CREOSOTE AND CREOSOTE RELATED SUBSTANCES

**14 September 2023**

**ECHA/RAC/RES-O-000007346-71-01/F**

**1 December 2023**

**ECHA/SEAC/RES-O-000007386-67-01/F**

**Opinion of the Committee for Risk Assessment**

**and**

**Opinion of the Committee for Socio-economic Analysis**

**on an Annex XV dossier proposing restrictions of the manufacture, placing on the market or use of a substance within the EU**

Having regard to Regulation (EC) No 1907/2006 of the European Parliament and of the Council 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (the REACH Regulation), and in particular the definition of a restriction in Article 3(31) and Title VIII thereof, the Committee for Risk Assessment (RAC) has adopted an opinion in accordance with Article 70 of the REACH Regulation and the Committee for Socio-economic Analysis (SEAC) has adopted an opinion in accordance with Article 71 of the REACH Regulation on the proposal for restriction of

**Creosote and Creosote-related substances**

**EC No.:** -

**CAS No.:** -

This document presents the opinions adopted by RAC and SEAC and the Committees' justification for their opinions. The Background Document, as a supportive document to both RAC and SEAC opinions and their justification, gives the details of the Dossier Submitter's proposal amended for further information obtained during the consultation and other relevant information resulting from the opinion making process.

**PROCESS FOR ADOPTION OF THE OPINIONS**

France has submitted on **7 October 2022** a proposal for a restriction together with the justification and background information. The Annex XV report conforming to the related requirements of the REACH Regulation was made publicly available at <https://echa.europa.eu/restrictions-under-consideration> on **21 December 2022**. Interested parties were invited to submit comments and contributions by **22 June 2023**.

ADOPTION OF THE OPINION OF RAC:

**Rapporteur, appointed by RAC: Bert-Ove LUND**

**Co-rapporteur, appointed by RAC: Raili MOLDOV**

The opinion of RAC as to whether the suggested restrictions are appropriate in reducing the risk to human health and/or the environment was adopted on **14 September 2023 by consensus** in accordance with Article 70 of the REACH Regulation.

The opinion takes into account the comments of interested parties provided in accordance

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with Article 69(6) of the REACH Regulation.

ADOPTION OF THE OPINION OF SEAC

**Rapporteur, appointed by SEAC: Martien JANSSEN**

**Co-rapporteur, appointed by SEAC: Luisa CAVALIERI**

The draft opinion of SEAC

The draft opinion of SEAC on the proposed restriction and on its related socio-economic impact has been agreed in accordance with Article 71(1) of the REACH Regulation on **8 September 2023**.

The draft opinion takes into account the comments from the interested parties provided in accordance with Article 69(6) of the REACH Regulation.

The draft opinion was published at <https://echa.europa.eu/restrictions-under-consideration> on **8 September 2023**. Interested parties were invited to submit comments on the draft opinion by **7 November 2023**.

The opinion of SEAC

The opinion of SEAC on the proposed restriction and on its related socio-economic impact was adopted **by consensus** in accordance with Article 71(1) and (2) of the REACH Regulation on **1 December 2023**.

The opinion takes into account the comments of interested parties provided in accordance with Articles 69(6) and 71(1) of the REACH Regulation.

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## 1. OPINION OF RAC AND SEAC

The Dossier submitter provided a proposal for a restriction on Creosote and Creosote-related substances. Following the Forum advice and comments received in the consultation on the Annex XV report, the conditions have been revised by the Dossier Submitter as provided in Table 1.

**Table 1: Restriction proposed by the Dossier Submitter**

Substance Identity (or group identity)	Conditions of the restriction
<p>Creosote and Creosote-related substances:</p> <p>(a) Creosote CAS No 8001-58-9 EC No 232-287-5</p> <p>(b) Creosote oil; wash oil CAS No 61789-28-4 EC No 263-047-8</p> <p>(c) Distillates (coal tar), naphthalene oils; naphthalene oil CAS No 84650-04-4 EC No 283-484-8</p> <p>(d) Creosote oil, acenaphthene fraction; wash oil CAS No 90640-84-9 EC No 283-484-8 EC No 292-605-3</p> <p>(e) Distillates (coal tar), upper; heavy anthracene oil CAS No 65996-91-0 EC No 266-026-1</p> <p>(f) Anthracene oil CAS No 90640-80-5 EC No 292-602-7</p> <p>(g) Tar acids, coal, crude; crude phenols CAS No 65996-85-2 EC No 266-019-3</p> <p>(h) Creosote, wood CAS No 8021-39-4 EC No 232-419-1</p> <p>(i) Low temperature tar oil, alkaline; extract residues (coal), low temperature coal tar alkaline</p>	<ol style="list-style-type: none"> <li>1. Wood treated with such substances shall be placed on the market in the conditions and derogations defined by the Biocidal Product Regulation (EU) No 528/2012.</li> <li>2. Wood treated with such substances and placed on the market irrespective of the date of impregnation with these substances:               <ol style="list-style-type: none"> <li>a. shall not be distributed, reused or subject to secondary use;</li> <li>b. shall not be placed or made available on the second-hand market.</li> </ol> </li> <li>3. By way of derogation from paragraph 2.a, wood treated with such substances can be reused, in accordance with paragraph 1, for the same use in the same country, under similar conditions and by the same original user.</li> <li>4. Once considered as waste, treated wood referred to under paragraphs 1 and 3 should be handled according to the Waste Framework Directive framework 2008/98/EC.</li> <li>5. The restriction shall apply from xx.xx.202x [12 months after its entry into force].</li> </ol>



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CAS No 122384-78-5 EC No 310-191-5	
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## 1.1. THE OPINION OF RAC

RAC has formulated its opinion on the proposed restriction based on an evaluation of information related to the identified risk and options to reduce it as documented in the Annex XV report and submitted by interested parties, as well as other available information as recorded in the Background Document. RAC considers that the restriction proposed by the Dossier Submitter on **Creosote and Creosote-related substances** is the **most appropriate Union-wide measure to address the identified risk** in terms of the effectiveness in reducing the risk, practicality and monitorability as demonstrated in the justification supporting this opinion, provided that the scope and conditions are modified as follows.

The conditions of the restriction proposed by RAC are provided below; changes to the Dossier Submitter’s proposal are presented in bold (when adding new text) and ~~strikeout~~ (when proposing removal).

**Table 2: Restriction proposed by RAC and SEAC<sup>1</sup>**

<b>Substance Identity (or group identity)</b>	<b>Conditions of the restriction</b>
Creosote and Creosote-related substances:  (a) Creosote CAS No 8001-58-9 EC No 232-287-5  (b) Creosote oil; wash oil CAS No 61789-28-4 EC No 263-047-8  (c) Distillates (coal tar), naphthalene oils; naphthalene oil CAS No 84650-04-4 EC No 283-484-8  (d) Creosote oil, acenaphthene fraction; wash oil CAS No 90640-84-9 EC No 283-484-8 EC No 292-605-3  (e) Distillates (coal tar), upper; heavy anthracene oil CAS No 65996-91-0 EC No 266-026-1  (f) Anthracene oil	1. Wood treated with such substances shall be placed on the market in the conditions and according to the derogations defined by the Biocidal Products Regulation (EU) No 528/2012.  2. Irrespective of the date of <b>treatment</b> with these substances, wood treated with such substances and placed on the market: <ul style="list-style-type: none"> <li>a. shall not be <b>further</b> distributed, reused or subject to secondary use;</li> <li>b. shall not be placed or made available on the second-hand market.</li> </ul> 3. By way of derogation from paragraph 2.a <b>and 2.b</b> , wood treated with such substances can be <b>placed on the second-hand market or</b> reused in the same Member State, if it is for the same <b>professional</b> use <b>permitted under the Biocidal Products Regulation (EU) No 528/2012.</b>  <b>When placing on the second-hand market or reusing wood treated with such substances, suppliers and professional users shall apply the same</b>

<sup>1</sup> The conditions of the restriction proposed by SEAC are identical to the changes proposed by RAC.

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<p>CAS No 90640-80-5 EC No 292-602-7</p> <p>(g) Tar acids, coal, crude; crude phenols CAS No 65996-85-2 EC No 266-019-3</p> <p><del>(h) Creosote, wood CAS No 8021-39-4 EC No 232-419-1</del></p> <p>(i) Low temperature tar oil, alkaline; extract residues (coal), low temperature coal tar alkaline CAS No 122384-78-5 EC No 310-191-5</p>	<p><b>conditions and risk management measures as identified in accordance with the Biocidal Products Regulation (EU) No 528/2012. The users shall maintain documentation of the purchase and sales and disposal of the creosote-treated material.</b></p> <p>4. Once it becomes a waste, treated wood referred to under paragraphs 1 and 3 shall be handled <b>as hazardous waste</b> according to the Waste Framework Directive 2008/98/EC.</p> <p>5. The restriction shall apply from xx.xx.202x [12 months after its entry into force].</p>
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## 1.2. THE OPINION OF SEAC

SEAC has formulated its opinion on the proposed restriction based on an evaluation of the information related to socio-economic impacts documented in the Annex XV report and submitted by interested parties as well as other available information as recorded in the Background Document. SEAC considers that the proposed restriction on **Creosote and Creosote-related substances** is the **most appropriate Union-wide measure** to address the identified risks, taking into account the proportionality of its socio-economic benefits to its socio-economic costs provided that the scope and conditions are modified, as proposed by RAC as demonstrated in the justification supporting this opinion.

The conditions of the restriction proposed by SEAC are identical to the changes proposed by RAC (see Table 2 in section 1.1 of this opinion).

## EXPLANATORY NOTES BY RAC AND SEAC

RAC makes the following notes on the proposed restriction:

- The Commission Implementing Regulation (EU) 2022/1950 of 14 October 2022 provides the renewal of the approval of creosote as an active substance according to the Biocidal Products Regulation (EU) No 528/2012 (BPR) and stipulates that, as of 30 April 2023, wood treated with creosote (only railway sleepers or utility poles for electricity or telecommunications) may only be placed on the market in EU Member States agreeing to it and when included on a list maintained by ECHA. However, once the treated wood has been placed on the market in the territory of one Member State and placed on the ECHA list (as per the BPR), it could then be further distributed to a second Member State and “placed on the market” as per REACH definition, even though that second Member State is not on the ECHA list. Under such circumstances, the treated wood could be placed on the market throughout the EU regardless of where it was first treated and placed on the market. Because the BPR no longer applies to the treated wood after the first placing on the market, this loophole can best be addressed via a REACH Restriction.

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- In case of further distribution, the labelling of the treated wood would fall under the REACH regulation. Thus, referral to the need for the “same risk management measures” as under the BPR (set out in paragraph 3), for the placing on the second-hand market, would ensure that the same labelling requirements would apply under REACH.
- In addition, the restriction aims to prohibit the import from third countries outside the EU (i.e., placing on the market) of pre-used (i.e., second-hand) railway sleepers and utility poles. This would fall under the prohibition on placing treated wood on the second-hand market set out in paragraph 2.b.
- The “similar conditions”, referred to in paragraph 3 of the Dossier Submitter’s restriction proposal, should be read as the same conditions as defined in the BPR for the placing on the market of newly creosote-treated wood<sup>2</sup> and for human health and

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<sup>2</sup> The renewing of the approval of creosote as an active substance for use in biocidal products ([EUR-Lex - 32022R1950 - EN - EUR-Lex \(europa.eu\)](#)) states in preamble point 14 that “...*Risk mitigation measures should be implemented to limit the exposure to creosote as far as possible, for example the recourse to mechanical or automated processes to avoid manual handling of treated wood, and the wearing of personal protective equipment by workers, and ensuring that treated wood is not accessible to the general public during storage. ...risk mitigation measures should be implemented to limit the exposure of the environment to creosote as far as possible, for example providing that industrial application is to be conducted within a contained area or on impermeable hard standing with bunding; that freshly treated timber is to be stored after treatment under shelter or on impermeable hard standing, or both, to prevent direct losses to soil, sewer or water; and that any losses from the application of the product are to be collected for reuse or disposal.*” and in point 20 that “...*the person responsible for the placing on the market of wood treated with creosote should ensure that the label of that treated wood includes specific statements aiming to protect human health and the environment,....*”

The Biocidal committee opinion further specify the risk management measures workers need to consider:

- Stringent adherence to the protective measures that are already in place.
- The PPE should be changed frequently, and immediately after contamination.
- The personal hygiene shall be strict and washing with suitable cleaning solutions shall be performed as soon as possible after each work task where there is a risk of exposure.
- Risk of exposure means direct skin contact or inhalation of the vapours. However, risks vary depending on the construction of the plant and during non-routine activities. Risks can, for example, occur when opening and maintaining of the vessel or entry into treating or preservative storage vessels. In these cases, additional protection can be advised.
- Respiratory protection, such as a full face mask with particle filter P2 or preferably P3 in combination with gas filter A (brown) should be worn at critical work tasks when there is a risk of inhalation exposure.
- Chemical resistant (coated) coveralls, or equivalent, should be worn over the regular work clothes at critical work tasks when there is a risk of exposure, and a thinner pair of (cotton) gloves should be worn under the chemical resistant gloves.
- Sky lifts (aerial access platforms) shall be used if feasible/whenever possible.
- Whenever possible, mechanical or automated processes should be used to avoid manual handling of treated timber (including down-stream work, for example during work with poles in service).
- Creosote-resistant boots should be worn when entering the vessel (e.g. for cleaning or maintenance).
- In order to ensure efficient protection, tight sealings (sleeve capes) may be used at the border of different garments, e.g., at the border of gloves and sleeves and at the border of trousers and boots.
- Where there is a potential contact with creosote or creosoted wood, long sleeves shirts and long pants must be worn.
- All activities with treated timber must be undertaken at industrial sites where application processes must be carried out within a contained area; situated on impermeable hard standing, with bunding to prevent run-off and a recovery system in place (e.g. sump), and that freshly treated timber shall be stored after treatment under shelter or on impermeable hard standing, or both, to prevent direct losses to soil, sewer or water, and that any losses of the product shall be collected for reuse or disposal.
- All treatment of timber must be undertaken within the industrial impregnation facilities on an impermeable surface or in case of brushing the wood components modified after standard vacuum pressure treatment at a construction site outdoors where soil is protected with a plastic foil or tray.
- Any spill or contaminated material must be collected and disposed as hazardous waste.
- It is agreed by the BPC members that additional risk mitigation measures are required; these are to prevent leakage into ground and to minimise contact of the general public with creosote-treated material.
- In case of storage of creosote-treated timber (temporarily) at other sites than impregnation facilities (e.g. the readiness stocks of transmission poles at the site of installation), the timber should be stored on an impermeable hard standing or on an absorptive material (e.g. bark) as well as under shelter (e.g. roof or covered with a tarpaulin), and if stored in residential or recreational areas an access by general public should be restricted (e.g. using a fence or a cover).

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environmental risk mitigation, as reflected in the amended text by RAC and SEAC.

- According to RAC's evaluation, reuse should be allowed not only for the original user (as proposed by the Dossier Submitter) but also for other professional users within the same Member State as far as they apply the same risk management measures required by the BPR. Paragraph 3 of the restriction proposal is updated accordingly.
- For more effective enforcement, a requirement to keep the documents related to the creosote-treated articles until their end of life could be placed on the users, as proposed in paragraph 3 of the restriction proposal. This would also ensure that professional users would have at their disposal relevant information on human health and environmental risks, as well as conditions and risk mitigation measures.
- Paragraph 2 of the initial restriction proposal is revised so that "in accordance with paragraph 1" is deleted, to be sure that the restriction applies to all treated wood, regardless of when the wood was treated.
- Additional clarity could be provided adding a definition of the terms "reuse", "secondary use" and "second hand market" (provided in paragraph 2 of the Dossier Submitter's restriction proposal).
- Paragraph 3 of the restriction proposal could be extended by reporting the risk management measures identified in the Biocidal Products Committee Opinion (see section 3.4.2).

SEAC makes the following notes on the proposed restriction:

- "Reuse" means the use for the same purpose as the original use. Reuse is defined in the Waste Framework Directive 2008/98/EC as follows: "13. 're-use' means any operation by which products or components that are not waste are used again for the same purpose for which they were conceived".
- "Secondary use" means the use for other purposes than the original use.
- "Second-hand use" means the use by another user who is not the original user. The transfer of the treated article from the original user to a subsequent user is considered to involve placing on the second-hand market, even if the treated article may be given away to the second-hand user free of charge. More information on second-hand goods is provided in the "Note on the approach to be taken by Dossier Submitters and Committees, and in the consultation on several issues related to restrictions: stocks, second hand goods and recycling" by the Restriction Task Force<sup>3</sup>.
- Paragraph 3 is considered to imply that reuse of, for instance, creosote-treated agricultural poles is no longer allowed as the use of newly creosote-treated wood for this application is currently prohibited under the BPR. Likewise, any future changes in the scope of the BPR approval should apply in the context of this restriction.
- In contrast to the current entry 31 of REACH Annex XVII, the new restriction proposal targets all wood treated with the substances listed in column 1. The current entry 31 makes a distinction between wood treated before 31/12/2002 and after 31/12/2002.

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<sup>3</sup> [RETF paper \(agreed 8/2017\) on stocks and second-hand goods \(europa.eu\)](#)

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SEAC further provides the following summary of justifications for the changes supported by SEAC:

1. A few editorial changes are incorporated.
2. One main difference to the Dossier Submitter's proposal is that not only original users, but also other professional users would be allowed to reuse treated articles under certain conditions. Furthermore, SEAC places additional emphasis on some of the requirements for reuse which were already implied by the Dossier Submitter but are made more explicit by SEAC. The more specific conditions for reuse by professional users include the following:
  - a. Only in the same Member State where the original use took place,
  - b. Only under the same conditions for placing on the market of creosote-treated wood as defined in the context of the BPR,
  - c. Only under the same risk management measures (also called risk mitigation measures) as defined in the context of the BPR,
  - d. Only as long as the first placing on the market and use is allowed in the context of the BPR.

In reference to a.: SEAC agrees with the Dossier Submitter and RAC that trade across internal EU borders should be prohibited as relevant BPR provisions allow Member States to make individual decisions on the use of creosote, which should not be weakened by the restriction. Furthermore, trade across borders is considered to increase the potential for occurrence of restricted secondary uses (incl. by the general public).

In reference to b., c. & d.: At the time of opinion adoption, Commission Implementing Regulation (EU) 2022/1950 specifies conditions for the placing on the market of creosote-treated wood, which this restriction aims to make applicable also for any potential subsequent placing on the market in the context of reuse. However, if BPR-related provisions are eventually replaced by other provisions or if country-specific approval is withdrawn, the most recent BPR provisions shall apply, meaning there should be a dynamic link between this restriction and relevant provisions in the context of the BPR.

SEAC agrees with RAC that other professional users in the allowed uses (see uses mentioned in the BPR approval) should maintain a comparable level of safety as the original users. Due to lack of protection, access by the general public to creosote-treated articles is meant to be completely eliminated. For any allowed reuses by professional users, SEAC agrees with RAC on the importance that the handling of creosote-treated articles is subject to the same risk management measures (also referred to as risk mitigation measures) as identified in the approval of the substances as biocidal products in accordance with the Biocidal Products Regulation (EU) No 528/2012 at the time at which the reuse takes place. Again, the most recent BPR provisions shall apply, meaning there should be a dynamic link between this restriction and relevant provisions in the context of the BPR.

3. SEAC supports the reuse of creosote-treated wood by other professional users only if the placing on the market and purchase can be sufficiently controlled and limited to verified professional users. The general public shall not have access to the treated articles and enforceability of this requirement is important. Otherwise, paragraph 3 should be replaced by the text proposed by the Dossier Submitter.

## 2. SUMMARY OF PROPOSAL AND OPINION

### 2.1. Summary of proposal

By amending entry 31 of Annex XVII to the REACH Regulation, the restriction proposal aims at reducing health risks (especially for the general public) and environmental risks associated with the distribution, reuse and secondary use of wood treated with creosote and creosote-related substances<sup>4</sup>. As defined by the Dossier Submitter, “reuse” means the use for the same purpose as the original use<sup>5</sup>, whereas “secondary use” means the use for other purposes than the original use.

**Figure 1: The concept of reuse, secondary use and the second-hand market**

Definitions	<b>REUSE</b> (for the purpose for which wood was originally treated and used)	<b>SECONDARY USE</b> (for a different purpose than the one for which wood was originally treated and used)
<b>SAME ENTITY</b> (as original user)	<i>Example: Railway sleeper reused as railway sleeper by same professional user</i>	<i>Example: Railway sleeper used for embankment of railway tracks by same professional user</i>
<b>DIFFERENT ENTITY</b> (than original user)	<i>Example: Railway sleeper reused as railway sleeper by different professional user (i.e. a different railway company or different country office)</i>	<i>Example: Railway sleeper used as fencing material by different user (incl. general public)</i> <i>Example: Reuse of fencing material (original railway sleeper) as fencing material</i>

 = involves/involved a transaction on the **second-hand market**

The Dossier Submitter finds evidence of creosote-treated wood being sold or otherwise made available to other users (incl. the general public) in many EU Member States. By restricting the trade of treated wood on the second-hand market, the restriction proposal is considered to provide better control of the distribution of treated articles throughout the EU. This is especially relevant for individuals that may be unaware of and/or unprotected from the exposure to the carcinogenic substances applied in wood treatment. Furthermore, adequate disposal of treated articles that are not considered reusable anymore is expected to become considerably more likely (also due to simplified enforcement of the regulation).

The proposed restriction is meant to replace entry 31 of Annex XVII to the REACH Regulation; this is to clarify the regulation of creosote and related substances under REACH and bring it into alignment with the renewed approval of creosote as an active substance under the

<sup>4</sup> To enhance readability of the opinion, the expression “wood treated with creosote and creosote-related substances” may be shortened to “creosote-treated wood”, “creosote-treated articles”, “treated wood” or “treated articles”, but the meaning remains the same.

<sup>5</sup> Reuse is defined in the Waste Framework Directive 2008/98/EC as follows: “13. ‘re-use’ means any operation by which products or components that are not waste are used again for the same purpose for which they were conceived”.

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Biocidal Product Regulation (BPR)<sup>6</sup>. The proposed restriction is further intended to be aligned with the provisions of the Waste Framework Directive (WFD).

The renewal of the approval under the BPR applies from 30 April 2023 and specifies that the only creosote-based biocidal products that may be authorised to be placed on the market and used are those for vacuum pressure impregnation of railway sleepers and utility poles for electricity and telecommunications. Such railway sleepers and utility poles may only be placed on the market in those EU Member States (MS) which have indicated their agreement to ECHA (ECHA maintains and publishes a list of these MS)<sup>7</sup>. Moreover, these biocidal products may only be authorised to be placed on the market and used when not doing so would have a disproportionately negative impact on society compared with the risk of using the substance. However, the BPR does not regulate or limit any subsequent supplies of the treated wood after the first placing on the market in any Member State, e.g., placing on the market on a second “unlisted” Member State. The proposed restriction thus intends to align the regulations under REACH and under the BPR by limiting reuse by professional users and banning secondary use of creosote-treated articles. Since no overlap between the BPR and the proposed restriction has been identified, no double regulation is expected.

The restriction proposal is intended to work in synergy with the Waste Framework Directive (2008/98/EC). At the end of its life cycle, wood treated with creosote or creosote-related substances is considered as hazardous waste and must be disposed of accordingly. As in the case of the BPR, no overlap between the proposed restriction and the WFD has been identified, and thus no double regulation is expected.

The Dossier Submitter assessed two Restriction Options (ROs); the first one bans all reuses and secondary uses of treated wood, whereas the second one exempts the reuse of treated wood by the same professional user as the original user.

**Figure 2: Summary of RO1**

Uses allowed in RO1	<b>REUSE</b> (for the purpose for which wood was originally treated and used)	<b>SECONDARY USE</b> (for a different purpose than the one for which wood was originally treated and used)
<b>SAME ENTITY</b> (as original user)	Example: Railway sleeper reused as railway sleeper by same professional user	Example: Railway sleeper used for embankment of railway tracks by same professional user
<b>DIFFERENT ENTITY</b> (than original user)	Example: Railway sleeper reused as railway sleeper by different professional user (i.e. a different railway company or different country office)	Example: Railway sleeper used as fencing material by different user (incl. general public) Example: Reuse of fencing material (original railway sleeper) as fencing material

 = involves/involved a transaction on the **second-hand market**

<sup>6</sup>COMMISSION IMPLEMENTING REGULATION (EU) 2022/1950 of 14 October 2022 renewing the approval of creosote as an active substance for use in biocidal products of product-type 8 in accordance with Regulation (EU) No 528/2012 of the European Parliament and of the Council. L269/1-8.

<sup>7</sup> [Microsoft Word - Creosote-PT8\\_DraftlistofMSfortreatedwood.docx \(europa.eu\)](#)

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**Figure 3: Summary of RO2**

Uses allowed in RO2	<b>REUSE</b> (for the purpose for which wood was originally treated and used)	<b>SECONDARY USE</b> (for a different purpose than the one for which wood was originally treated and used)
<b>SAME ENTITY</b> (as original user)	<i>Example: Railway sleeper reused as railway sleeper by same professional user</i>	<i>Example: Railway sleeper used for embankment of railway tracks by same professional user</i> <span style="color: red; font-size: 2em;">✗</span>
<b>DIFFERENT ENTITY</b> (than original user)	<i>Example: Railway sleeper reused as railway sleeper by different professional user (i.e. a different railway company or different country office)</i> <span style="color: red; font-size: 2em;">✗</span>	<i>Example: Railway sleeper used as fencing material by different user (incl. general public)</i> <span style="color: red; font-size: 2em;">✗</span> <i>Example: Reuse of fencing material (original railway sleeper) as fencing material</i> <span style="color: red; font-size: 2em;">✗</span>

= involves/involved a transaction on the **second-hand market**

The Dossier Submitter selected the second restriction option (RO2) and further clarified its objectives:

- **Reuse** of creosote-treated wood is proposed to be allowed solely for the same entity as the original professional user, under the similar conditions, in the same Member State and for the same use as the original use. For example, railway sleepers can be reused as railway sleepers and utility poles can be reused as utility poles if the condition of the wood allows. Uses of creosote no longer allowed under the BPR should not be considered covered by the derogation described in paragraph 3 of the proposed restriction. For example, after entry into force of the proposed restriction, subjecting creosote-treated wood originally used as agricultural fencing material to reuse for the same original purpose and by the same original user should not be understood as being allowed under the proposed derogation. During opinion development, the Dossier Submitter further clarified that, under RO2, the reuse is meant to be allowed only in those Member States that agree with the first placing on the market of creosote-treated wood for the relevant use in line with the latest BPR provisions (see previous footnote). This means that, after entry into force of the proposed restriction, a railway sleeper cannot be reused by the same original user, in the same Member State and under similar conditions for the same original use if the relevant Member State did not sign on to the list of Member States that continue to allow the first placing on the market of creosote-treated sleepers in line with the prevailing BPR provisions.
- After entry into force of the restriction, subjecting any kind of creosote-treated wood to **secondary use** is foreseen to be banned. This includes wood that has been treated with creosote or creosote-related substances before December 2002, which was exempted under the previous restriction entry.
- Since the reuse by a different entity than the original user and the secondary use (by any entity) is proposed to be banned by the Dossier Submitter, there shall not be a **second-hand market** for creosote-treated wood according to the Dossier Submitter's proposal.
- The proposed restriction does not affect the continuation of uses of creosote-treated wood for other purposes other than those authorised under the BPR (railway sleepers



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and utility poles) as long as the treated wood is not subjected to reuse or secondary use by its current user. For example, creosote-treated wood that is still in its original use as agricultural fencing material by its original user at the time of entry into force of the restriction is not addressed by the proposal at hand. Any creosote-treated wood that is already in use in secondary applications will eventually become waste and therefore need to be disposed of as foreseen by the Waste Framework Directive.

**Figure 4: Illustration of RO2 intentions by use scenario**

Original use of treated article	Before entry into force, the article...				Entry into force of the proposed restriction	After entry into force, the article...				
	has been subjected to reuse...		has been subjected to secondary use (e.g. landscaping material)...			can be continued to be used (i.e. not subjected to reuse or secondary use)...	can be subjected to reuse...		can be subjected to secondary use...	
	by the original user?	by a new user?	by the original user?	by a new user?		by the current user?	by the current user?	by a new user?	by the current user?	by a new user?
Railway sleeper (or utility pole*)	no	no	no	no	Entry into force of the proposed restriction	yes	yes***	no	no	no
	yes	no	no	no		yes	yes***	no	no	no
	no	yes	no	no		yes	no	no	no	no
	no	no	yes	no		yes	no	no	no	no
	no	no	no	yes		yes	no	no	no	no
Other uses (e.g. agricultural fence**)	no	no	no	no		yes	no	no	no	no
	yes	no	no	no		yes	no	no	no	no
	no	yes	no	no		yes	no	no	no	no
	no	no	yes	no		yes	no	no	no	no
	no	no	no	yes		yes	no	no	no	no

\* The Dossier Submitter’s analysis finds that utility poles are rarely subjected to reuse or secondary use due to the low quality of the wood after extraction for the original use.

\*\* Other uses here cover all kinds of uses that are not allowed anymore according to BPR provisions, for example, this includes the use of creosote-treated wood for agricultural fencing.

\*\*\* The dossier made clear that reuse is only allowed by the original user, in the same country, under similar conditions, and for the same use as the original use. During opinion development, the Dossier Submitter further clarified that, under RO2, the reuse is meant to be allowed only in those Member States that agree with the first placing on the market of creosote-treated wood for the relevant use in line with the latest BPR provisions.

Creosote contains a mixture of polyaromatic hydrocarbons (PAHs) and fulfils the criteria both for PBT and/or vPvB substance and for being carcinogenic (Category 1B). Both properties are regarded as non-threshold properties. The Dossier Submitter was not able to quantify the environmental and human health benefits of the proposed measures based on the analysis of the risk reduction potential of the proposed restriction. However, the Dossier Submitter emphasised the need to minimise the exposure of the general public (e.g., consumers) to creosote and creosote-related substances as well as the emissions of the substances to the environment due to old creosote-treated wood being sold/available in many Member States.

The Dossier Submitter’s analysis of alternatives and the assessment of restriction impacts are focused on the reuse of treated railway sleepers because the condition of treated utility poles was reported to be too poor in most cases to allow further reuse after their first use and extraction. Thus, no significant impact of restricting reuse of creosote-treated utility poles was assumed and the need to find alternatives specifically for the reuse of utility poles was of lower importance to the analysis. Moreover, the ban of all secondary uses of creosote-treated articles is already considered justifiable as per the BPR-related assessment which

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resulted in the withdrawal of the legal basis for the first placing on the market of creosote for other uses than railway sleepers and utility poles.

Following the renewal of the approval of creosote as an active biocidal substance under the BPR, the Dossier Submitter generally considers new creosote-treated wood to be a likely used alternative for the reuse of creosote-treated railway sleepers<sup>8</sup>. This is based on the availability, durability and cost of alternatives at the time of dossier development and considers whether wood is still the best option from technical and economic point of view. Chemical alternatives to creosote impregnation (e.g., water- or oil-based copper hydroxide products) are generally considered less attractive due to limited commercial availability, lower wood protection potential, higher prices, or other effects such as ignitability, conductivity or similar risk profile. Yet, the Dossier Submitter considers that chemical alternatives show potential to become preferred alternatives as research and development efforts continue and economies of scale (resulting from increased adoption) may lower their price. Other materials than wood are generally considered available and partly already implemented to substitute the use of creosote-treated wood (e.g., concrete and composite plastic sleepers). However, non-chemical alternatives are not yet considered technically and economically feasible for all users and/or all use cases (e.g., specific tunnels, bridges, tight curves, switching points, low traffic lines or areas of temperature and humidity fluctuations). Given the growing potential of chemical and non-chemical alternatives and the fall-back option of freshly creosote-treated sleepers where other alternatives are not yet ready, the Dossier Submitter concludes that alternatives to the reuse of sleepers exist in all cases.

The quantifiable costs of the restriction estimated by the Dossier Submitter range from approximately €150,000/year to €9 million/year, depending on the reuse volume and the alternative chosen by the user.

## 2.2. Summary of opinion

### 2.2.1. RAC opinion summary

- Creosote contains a mixture of polyaromatic hydrocarbons (PAHs) and fulfils the PBT and/or vPvB and carcinogenic category 1B criteria. These are all regarded as non-threshold hazardous properties, warranting minimisation of emissions and exposure.
- Distribution, reuse and secondary uses of creosote-treated wood are regulated by REACH, but the current wording of entry 31 of Annex XVII is interpreted or applied differently among the EU Member States, indicating that the existing regulatory measures are not sufficient to control the risk. In addition, entry 31 of Annex XVII is not aligned with the renewal of the approval of creosote as an active biocidal substance under the BPR.
- There is evidence that used creosote-treated wood (e.g., sleepers and utility poles for electricity or telecommunications) is sold in many EU Member States. Secondary uses and reuse of such wood may give rise to exposure of humans and the environment to the mentioned hazardous substances.

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<sup>8</sup> Only applicable for railway companies in countries that still allow the first placing on the market of creosote for treatment of sleepers under the latest BPR provisions. As mentioned earlier, creosote-containing biocidal products may be authorised by EU Member States for impregnation of railway sleepers and utility poles where no suitable alternatives are available in the national context.

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- The scope of the restriction proposal is clear and focuses on restricting the use of creosote-treated wood after the first placing on the market (as regulated by BPR).
- RAC supports retaining all creosote-like substances under entry 31 of the REACH Regulation except creosote wood (CAS 8021-39-4) that should be removed.
- In order to protect the general public and the environment, the Dossier Submitter proposes to ban secondary uses and the second-hand market of creosote-treated wood and restrict the use of old creosote-treated wood to the original user in the same Member State under the same conditions and for the same uses as allowed in the BPR.
- The human health and environmental risk from the non-threshold PAHs in creosote-treated wood cannot be quantified in a formal risk assessment, but they can still be minimised by restricting reuse and secondary use of such treated wood.
- RAC is not aware of any operational conditions or risk management measures that could be implemented by the general public to prevent PAH exposure. No such measures that could decrease the risk during distribution, reuse or secondary use are recommended by the manufactures and/or importers, and even if such information were provided when buying the products, it would be probably not available afterwards (for example after long period of outdoor use).
- The BPR sets out requirements for professionals treating the wood with creosote and, in general, professional users are expected to understand and have access to information on the risks and on the protective measures to be adopted. The BPR also sets out conditions for the storage of the treated wood<sup>9</sup>. These conditions apply only when the treated wood is first placed on the market. However, new labels may need to be added in the reuse phase (allowed reuse for the same purpose in the same Member State), because it is very likely that the original labels would not last, for example after 20 or more years of outdoor use of the wood. The restriction proposal discusses an introduction of a permanent labelling requirement to overcome this problem.
- RAC supports that a restriction on an EU-wide basis is needed to minimise emissions to the environment and exposure of the general public (consumers) to creosote and creosote-related substances.
- Risk of alternatives to creosote is discussed under the BPR (Opinion on the application for renewal of the approval of the active substance ECHA/BPC/274/2020). An assessment of the risk of alternatives has not been conducted in this restriction proposal. RAC notes that the main alternative is considered to be new creosote-treated wood, although comments in the third-party consultation indicate that alternatives are approved and used in some Member States to various extents. RAC agrees with the Dossier Submitter that overall environmental emissions from new creosote-treated wood can be expected to be higher compared to reused creosote-treated wood.
- Since the BPR only addresses the first placing on the market, REACH can address the

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<sup>9</sup> The BPR renewal of creosote states in the Annex some conditions about storage: *"The person responsible for the placing on the market of a treated article shall ensure that the label of that treated article includes the statement: 'During storage, treated wood shall not be accessible to the general public. Measures shall be taken to prevent unauthorised access. Treated wood must be stored on impermeable hard standing or on absorptive material to prevent runoff to the environment, and under shelter or covered with a tarpaulin. Any spill or contaminated material must be collected on such sites and disposed as hazardous waste.'"*

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risks arising from the distribution, reuse and secondary uses of creosote-treated wood.

- RAC concludes that the risk management measures, operational conditions, and derogations are appropriate and effective for the original (professional) user because all distribution, reuse or secondary use will be banned for the general public.
- With regard to the additional restriction options assessed by SEAC (see section 3.4.3.1), RAC supports to allow the placing on the second-hand market and reuse of wood treated with creosote by professional users (same original professional user and other professional users) provided the same conditions and risk management measures (as identified under the BPR for the first placing on the market and use) are applied and the reuse is for the same use and takes place in the same Member State of the first use (option 3).
- Regarding practicality, RAC finds the restriction practical if the wording is improved as suggested in the conditions for the restriction. Regarding enforceability, RAC notes that the FORUM advice discusses sampling of wood and chemical analysis of PAH, but RAC notes that all railway sleepers and utility poles (most likely to be used for secondary purposes) have been treated and would expect that visual inspection and the sharp odour would be sufficient for enforcement.
- The restriction can be monitored via surveillance programs of national enforcement bodies and existing reporting systems, following market trends for alternatives, and internet trade of old creosote-treated wood. A permanent labelling system (not in place today) would allow a better follow up of the treated articles all along their service life.
- For more effective enforcement, a requirement to keep the required documents on the creosote-treated articles until their end of life could be placed on the users as part of the restriction proposal.
- The suggested restriction is considered to be the most appropriate EU-wide measure as it aims at amending/clarifying the current entry 31 of the REACH Regulation.
- The main uncertainties concern the limited exposure information available and how to best phrase the restriction entry text to obtain the desired outcome.

### **2.2.2. SEAC opinion summary**

- SEAC considers that the scope of the proposal is sufficiently clear. The Dossier Submitter provided sufficient information about the use of creosote and related substances in wood treatment and also made clear why the analysis of alternatives and costs deriving from the restriction has been focused on the reuse and secondary use of railway sleepers. The reuse and secondary use of creosote-treated wooden utility poles is considered less likely due to the poor condition of the material after use, however, SEAC finds that its occurrence cannot be excluded as confirmed by third-party consultation comments. Furthermore, the absence of regulatory overlaps with the BPR and WFD is clear, as these legislations cover the lifecycle stages of the first placing on the market and the disposal, respectively, whereas the restriction covers subsequent placing on the market and the use in between these two above-mentioned stages.
- SEAC notes that the aim of the Dossier Submitter's restriction proposal is clear. By banning any kind of trade of treated articles on a second-hand market, the Dossier Submitter's proposal provides a basis for firm control of further distribution of the

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articles treated with carcinogenic substances throughout the EU and for the enforcement of the responsibility to adequately handle and dispose of the treated articles after use. Particular emphasis is put on the protection of the general public, for which the ban of secondary uses (e.g., in gardens) is most relevant. The general public is most likely untrained to handle the treated articles and may even be unaware of the potential exposure to carcinogenic substances applied to the wood before the second-hand acquisition. Additionally, the Dossier Submitter's proposal aims at regulating how existing creosote-treated wood can be reused in alignment with the latest provisions of the BPR. Without concluding on the proportionality, SEAC agrees with the Dossier Submitter that, through the proposed restriction:

- Protection of the general public can be improved significantly;
  - Only professional users would be allowed to handle the treated articles under similar conditions as defined by the latest BPR provisions;
  - Distribution of treated wood can be better controlled because of limiting of the placing on the market;
  - Proper disposal becomes more likely;
  - Consistency of enforcement may be facilitated considerably.
- SEAC further agrees that the replacement of the previous restriction entry by the new proposed restriction is justified based on the lack of clarity of the current entry 31 of REACH Annex XVII and the need to resolve the misalignment of the existing restriction with the latest BPR provisions (i.e., Commission Implementing Regulation 2022/1950 of 14 October 2022). Also, potential future changes in the BPR-related context are, by design, aligned with the new proposed restriction. The replacement thus provides a significant improvement of the regulation of reuse and secondary use of creosote-treated articles under REACH through simplification and clarification. In contrast to the current entry 31 of REACH Annex XVII, no distinction is made between wood treated before and after 31/12/2002 and reuse will be confined to clearly defined applications, as long as the relevant applications are allowed under the BPR. SEAC notes that applications of creosote wood that are no longer allowed under the BPR (e.g., fences or agricultural stakes) are ensured to be no longer allowed under REACH, either. Treated wood resulting from these applications formally becomes waste, as reuse or secondary use will no longer take place under the current restriction proposal.
  - SEAC agrees with the Dossier Submitter that Union-wide action is justified. In this context, it should be noted that both previously existing regulatory measures (i.e., the relevant BPR provisions and the previous restriction entry) represent EU-wide measures. SEAC considers that the solution to the lack of clarity and alignment of the previously existing restriction should likewise be implemented at EU level. According to the BPR provisions, the first placing on the market of creosote-treated wood (railway sleepers and utility poles) is only allowed in the EU Member States that indicate their agreement with the use, which in turn depends on whether or not technically and economically feasible alternatives are available in the Member State concerned. When comparing the merits of national and Union-wide regulation, it can be expected that a Union-wide measure addressing the subsequent reuse and secondary use of treated wood will create better harmonisation of regulation in the group of Member States that agreed to the placing on the market of such treated wood on their territory. However, going beyond this group of Member States, an EU-wide measure is also expected to considerably reduce the uncontrolled distribution of creosote-treated wood throughout

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the rest of the Union (and thus uncontrolled exposure of humans and the environment), and in particular to those Member States that do not allow the first placing on the market due to the availability of suitable alternatives.

- SEAC concurs with the Dossier Submitter that a restriction is generally the most appropriate EU-wide measure. One reason is that wood treated with creosote or creosote-related substances is currently already intended to be regulated by the existing restriction entry 31 of Annex XVII of REACH. As explained before, this entry lacks clarity and alignment with the renewed BPR approval and is thus intended to be replaced with a new, improved version. SEAC expects that the new proposal will avoid a large number of the current interpretation differences of entry 31 among the Member States. For example, a number of secondary uses are currently already intended to be prohibited by entry 31, for instance, indoor uses, as well as uses in parks, gardens and other recreational and leisure facilities (see paragraph 3 of entry 31). Yet, the lack of clarity in the existing restriction leads to different interpretations of the ban across different Member States. SEAC further notes the implementation of a national restriction on creosote-treated wood in France and that the Member State is required under the safeguard clause in article 129 of REACH to prepare an Annex XV restriction dossier at EU level. Besides a restriction, the Dossier Submitter analysed the authorisation requirement under REACH (Annex XIV) and the labelling of creosote-treated articles as alternative Risk Management Options (RMOs). SEAC notes that both of these approaches were dismissed by the Dossier Submitter as not being applicable or effective enough compared to the proposed restriction. SEAC agrees with the Dossier Submitter's conclusions on the adequacy of these other RMOs. Furthermore, the existing frameworks of the BPR and the WFD are discussed as RMOs by the Dossier Submitter, but as mentioned before, these are not found suitable for regulating the identified risks because they cover other lifecycle stages of the treated wood (i.e., first placing on the market and waste, respectively).
- SEAC notes RAC's conclusion that the proposed restriction will lead to a reduction in the exposure of humans due to the ban of secondary uses and the limitation of reuse of creosote-treated wood. Thereby, especially the risk to the general population is reduced. However, it is considered that banning reuse by other professional users would likely increase the use of freshly creosote-treated wood as long as the use of freshly treated wood is still allowed under the BPR and this represents the most likely alternative to the reuse of old creosote-treated wood. Because freshly treated wood is expected to have a higher leaching rate, banning reuse by other professional users can lead to somewhat higher environmental releases of creosote.
- The Annex XV dossier provides an analysis of alternatives for the reuse and secondary use of creosote-treated wood, which is partly based on the BPR assessment of alternatives. This analysis of alternatives mainly focuses on the use of creosote-treated wood as railway sleepers because the reuse and secondary use of utility poles is reported to be limited due to low quality of the wood after extraction. Some attention is also given to other applications (e.g., fences, posts, stakes, and agricultural poles), but it is considered that the BPR largely already identified suitable alternatives for such uses, which led to the limitation of allowed uses to railway sleepers and utility poles at the stage of the BPR renewal. SEAC notes the outcome of the BPR assessment of alternatives for the first placing on the market of creosote-treated wood and relies on the quality of this assessment. SEAC agrees with the Dossier Submitter that this indicates the availability of suitable alternatives for secondary uses of railway sleepers and utility poles. The available assessments carried out in the context of the BPR and

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by the Dossier Submitter also provide some insight on whether alternatives are available for reuses of railway sleepers and utility poles. SEAC further agrees with the Dossier Submitter's assessment that alternatives are available for reuses of railway sleepers and utility poles. Comments received in the third-party consultation on the Annex XV report further seem to confirm that especially non-chemical alternatives are used more and more widely. However, it is important to note that the most likely alternative for the reuse of creosote-treated wood is still considered to be the fresh treatment of railway sleepers and utility poles with creosote (as long as it is still allowed under the BPR), which does not represent a safer and less hazardous alternative.

- Due to the unclear scope of the existing restriction entry 31, SEAC finds that it is not always easy to identify which impacts are specifically caused by the new restriction proposal. Furthermore, data limitations encountered by the Dossier Submitter complicate the quantification of the identified impacts of the proposed restriction in comparison to the baseline of the current entry 31. This means that many impacts can only be described at a qualitative level.
- As part of its evaluation of the costs and benefits, SEAC separately analysed the different components of the Dossier Submitter's proposal. This means that, for clarity in presenting the analysis, in addition to the two restriction options (ROs) proposed by the Dossier Submitter (RO1 and RO2), three additional notional restriction options (RO3, RO4, and RO5) with different combinations of the underlying components are presented. This is to make sure that the assessment is as complete as possible. All options ban the secondary use by the general public as this is the main aim of the proposed restriction. The options differ only with respect to what is allowed for the original user and/or other professional users in terms of reuse and secondary use of creosote-treated sleepers and utility poles. The options have been described in section 3.4.3.1 of this opinion and have been depicted in Figure 5.
- SEAC notes that restriction costs for the various actors will depend on the provisions of the restriction option implemented. Costs also depend on whether the alternatives will become less expensive (and safer) in the future and on the possibility of reuse. RO1 prohibits all reuses and secondary uses, which results in higher costs compared to the other ROs. RO2 results in lower costs than RO1 because it at least allows reuse by the original user. RO3 entails lower costs than RO2, as reuse by other professional users remains allowed in addition to reuse by the original user. The costs of RO4 are expected to be higher compared to RO3 because RO4 bans the reuse by other professional users. Although RO4 allows secondary use by the original user, which is not allowed in RO3, this is not expected to make RO4 more favourable than RO3 because the cost of restricting reuse by other professionals is considered more significant than the cost of restricting secondary use by the original user. Yet, the costs of RO4 are still expected to be lower compared to RO2. RO5 is the least strict option with lower costs than all other options.
- SEAC's evaluation of the restriction benefits indicates that most significant benefits can be achieved by preventing secondary use by the general public. This is applied in all five ROs. Banning the secondary use by professional users, as applied in RO1, RO2 and RO3, further generates benefits. Therefore, SEAC considers the two options that still allow secondary use (RO4 and RO5) less favourable in terms of benefits. Of the three remaining options, RO1 prohibits all reuses and RO2 only allows reuse by the original user. For these ROs, benefits can be considered limited or even negative in case new creosote-treated wood is the preferred alternative to reuse, which is

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currently likely to be the case in a considerable amount of Member States. According to SEAC's evaluation, RO3, which allows reuse by the original and other professional users, leads to higher environmental benefits compared to RO2 if reuse is substituted by new creosote-treated wood products, which SEAC considers the most likely scenario.

- SEAC notes that a pre-dominantly qualitative assessment of the costs and benefits was carried out by the Dossier Submitter, hence it is not possible to quantify the assessment of proportionality. SEAC considers that all assessed restriction options are proportionate because every RO bans the use of creosote-treated articles by members of the general public, who are likely to be unaware of the risks and face a high risk of uncontrolled exposure to creosote and related substances. The benefits of avoiding these health impacts are considered to be substantial. Compared to the most substantial benefit of protecting the general public, the costs of the assessed restriction options are found to be relatively small. Therefore, it is very likely that each RO results in a positive net-benefit. In addition to the finding that all ROs are very likely to be proportionate, SEAC's assessment looks at the comparison of net-benefits of the different ROs to find the most proportionate one. SEAC has considered the two restriction options proposed by the Dossier Submitter (RO1 and RO2) as well as the other three options (RO3, RO4 and RO5). RO4 and RO5 were not considered preferable for several reasons. These options allow secondary uses that are currently prohibited under the BPR, which suggests that sufficient alternatives are available. Furthermore, the exposure through secondary use of creosote-treated sleepers and utility poles, which may also become available to the general public, would contradict the aim to minimise emissions of and exposure to CMR and PBT/vPvB substances as much as possible. Based on the qualitative evaluation of the costs and benefits, SEAC considers RO3 to be the preferred restriction option in terms of proportionality, closely followed by RO2. Costs of RO1 would be considerably higher and benefits would be limited. SEAC notes however that the advantages of RO3 could be nullified if the placing on the market of second-hand railway sleepers and utility poles for reuse by other professional users inadvertently leads to the general public purchasing these articles. Therefore, SEAC supports RO3 only if there is a possibility to control the market and prevent access by the general public. If this is not possible, SEAC concludes that RO2 becomes the preferred restriction option in terms of proportionality.
- SEAC considers the Dossier Submitter's proposal to be practical and enforceable based on the clear ban of the second-hand market for wood treated with creosote and related substances. This applies both to RO1 and RO2. By ensuring that the original professional user will be responsible for the treated article over its entire life cycle (ending with the adequate disposal), enforceability becomes simplified, and practicality increases. However, FORUM and SEAC find that RO3 will also be practical and enforceable with proper documentation on purchase, sales and disposal.
- SEAC agrees with RAC's conclusion that the reduction of risk through the proposed restriction is monitorable over time. Based on similar reasoning as used in the assessment of practicality and enforceability, SEAC considers it possible for enforcement authorities to monitor the implementation of the restriction (applicable to both RO2 and RO3) by the means of documentation. SEAC expects that the current obligation under the Biocidal Product Regulation (EU) No 528/2012 to label treated articles upon placing on the market would facilitate monitoring in future. SEAC questions the cost-effectiveness of more permanent labelling proposed by RAC.



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- SEAC observes uncertainties about the volumes of reuse, the current and future substitution by alternatives, as well as about costs, benefits, and proportionality. Although a sensitivity analysis is not possible for all the variables that contribute to the uncertainties, SEAC considers them not to have major impacts on SEAC's conclusions on the effectiveness, practicality and monitorability of all the restriction options assessed by SEAC. SEAC also considers that these uncertainties are not expected to prevent the decision-makers from concluding on which is the most appropriate EU-wide measure.

## 3. JUSTIFICATION FOR THE OPINION OF RAC AND SEAC

### 3.1. RISK ASSESSMENT

#### 3.1.1. Scope of the risk assessment

##### Summary of Dossier Submitter's assessment:

The Dossier Submitter considered the same substances as are in the scope of the current entry 31 of REACH Annex XVII to be in the scope of the restriction proposal. By amending entry 31 of Annex XVII, the restriction proposal aims at reducing the health (especially for the general public) and environmental risks associated with the distribution, reuse and secondary uses of wood treated with creosote and creosote-related substances. Additionally, the second-hand market of creosote-treated wood is considered to be of special concern, because used wood treated with creosote and creosote-related substances can be and is sold in many EU Member States.

##### RAC conclusion(s):

- RAC concludes that the scope of the risk assessment is clearly defined and basically in line with (but clearer than) the present entry 31 of REACH Annex XVII.
- The substances within the scope of the risk assessment are clearly described and there is a clear justification to target this group of substances.
- RAC would support retaining all creosote-like substances except creosote, wood (CAS 8021-39-4).
- The scope of the risk assessment is justified in sufficient detail and the risks to be addressed with the proposed restriction are also well described.
- The scope of the hazard assessment is justified.
- The uses within the scope of the risk assessment are clearly described and justified.

##### Key elements underpinning the RAC conclusion(s):

RAC notes that the restriction proposal is mainly targeted to ban any secondary use by consumers of wood treated with creosote or creosote-related substances. Secondary use is not defined in EU legislation, but it is defined in the restriction proposal by the Dossier Submitter as any use of wood treated with creosote or creosote-related products for other uses than their initial use (e.g., railway sleepers and utility poles for electricity or telecommunications used for agricultural fencing or residential landscaping).

RAC notes the diverging interpretation and application of the current wording of the entry 31 of REACH Annex XVII by different EU Member States as well the misalignments of REACH with the new BPR provisions.

The scope of the substances targeted (creosote, CAS 8001-58-9, and eight creosote-related substances: CAS no. 61789-28-4, 84650-04-4, 90640-84-9, 65996-91-0, 90640-80-5, 65996-85-2, 122384-78-5, and 8021-39-4) is limited to the substances listed in the current entry 31 of REACH Annex XVII. It is not possible to clearly describe all the uses that will be restricted, as they include any secondary use by the general public (consumers), for example in gardens. All uses by the general public (consumers) are considered to present a risk that needs to be addressed.

The restriction proposal also aims at restricting the reuse of second-hand treated wood by allowing the placing on the second-hand market only in the same Member State and reuse

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only by professionals applying the same risk mitigation measures and for the same uses identified in the BPR (railway sleepers or utility poles). The user (actor) is elsewhere defined as any natural or legal person established in a Member State of the EU, with the purpose to stop potential transfer of treated wood to another Member State (e.g., via a daughter company, etc.).

RAC notes that a second-hand market exists and that it can be extensive in several Member States for creosote-treated wood.

Creosote-treated (Grade B and C creosote) wood has been used and is presently in use, but there is no current use in the EU of the creosote-related substances included in the restriction proposal. However, as they have been used in the past for wood treatment and may still be used in other parts of the world, such wood may still be available for secondary use, RAC supports their inclusion within the scope of the restriction. The inclusion of all the substances could be supported by the fact that all of them are already included in the current entry 31 of REACH Annex XVII.

One of the creosote-related substances, Creosote, wood, (CAS 8021-39-4) does not share the same hazardous properties (ATSDR, 2023) since it has not been identified as carcinogenic or fulfilling PBT and/or vPvB criteria. Additionally, if a PAH-analysis would be carried out to confirm the presence of creosote in the wood (action not supported by RAC), Creosote, wood, would not be detected since it does not contain PAHs. Also, it is unclear if creosote, wood, has ever been used to preserve wood in the EU, and it is also not known if it shares the characteristic properties (e.g., typical odour) of the coal tar-based creosote and creosote-like substances. Thus, for REACH Annex XVII entry 31, RAC would support retaining all creosote-like substances except creosote, wood (CAS 8021-39-4).

RAC considers that the information provided on uses is underpinned by reliable and relevant data from the market surveys conducted by the Dossier Submitter and from other relevant sources of information. The scope of the risk assessment is also in line with the BPR risk assessment, concluding that no safe uses can be identified when combining the outcomes of the human health and environment risk assessment. The Commission's decision to renew the approval of creosote as a biocidal active substance ((EU) 2022/1950 of 14 October 2022) specifies that creosote-based biocidal products may only be authorised for treatment by vacuum pressure impregnation of wood in industrial installations to specifically make railway sleepers, or utility poles for electricity or telecommunications<sup>10</sup>. The placing on the market of treated wood (railway sleepers and utility poles) is restricted to the Member States that indicate their desire by inclusion on the ECHA list. Once the treated wood is first placed on the market in the territory of a Member State on the ECHA list (as per the BPR) it could then be further distributed while still unused to a second Member State and made available on the market ("placed on the market" as per REACH definition) even though that second Member State is not on ECHA's list. However, no legislation regulates the possible further supply of the wood (while still unused) to other Member States because the BPR only covers the first placing on the market in the EU.

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<sup>10</sup> The authorisations of such biocidal products are subject to several conditions specified in the renewal, including the fact that a product may be authorised in a Member State if the condition of the Article 5(2), point (c) of the BPR is met. The decision also specifies that the assessment of applications for product authorisation shall pay particular attention to: (a) professional users; (b) secondary exposure of the general public; (c) the soil and aquatic compartments; (d) the risks and the efficacy linked to any uses covered by an application for authorisation, but not addressed in the Union level risk assessment of the active substance. BPR Art.5(2)(c) states: not approving the active substance would have a disproportionate negative impact on society when compared with the risk to human health, animal health or the environment arising from the use of the substance.

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### 3.1.2. Hazard(s)

#### Summary of Dossier Submitter's assessment:

The Dossier Submitter provided a description of the hazards related to creosote and creosote-related substances and justified the restriction based on the non-threshold effects of these substances (carcinogenicity, PBT, vPvB), which would then require minimisation of emissions and exposures. Creosote, wood (CAS 8021-39-4), is the only exception, because it contains mainly phenolic compounds (phenol, guaiacol and cresol).

#### RAC conclusion(s):

- RAC concludes that the description of the identified hazards is adequate for the substances covered by the proposed restriction and considers it well justified.
- Creosote is a well-established non-threshold substance, containing constituents fulfilling the PBT and/or vPvB criteria and being carcinogenic Cat. 1B<sup>11</sup>.
- Most creosote-related substances included in the restriction proposal are also classified as carcinogenic, with creosote, wood (CAS 8021-39-4) as the only exception.

#### Key elements underpinning the RAC conclusion(s):

Creosote is a complex UVCB substance containing a mixture of substances with more than 80% polyaromatic hydrocarbons (PAHs), and therefore fulfils the criteria for PBT and/or vPvB substances and for being carcinogenic (some are genotoxic carcinogens). Both hazardous properties are regarded as non-threshold properties, and minimisation of exposure and emissions are therefore warranted. Although a proper risk assessment cannot be conducted for a non-threshold substance, the risk assessment under the BPR concluded that no safe uses can be identified when combining the outcomes of the human health and environment risk assessment, further supporting the need for minimisation of emissions and exposure. Some PAHs are also classified Repro. 1B, further stressing the need for minimising exposure. Grade A creosote, containing the highest concentration of the genotoxic carcinogen benzo(a)pyrene (B(a)P), is no longer allowed to be used, but wood treated with Grade A creosote may still be in use and thus available for distribution/reuse/secondary use.

A mouse carcinogenicity study using dermal exposure to creosote (Buschmann et al., 1997) has been used in CICAD 62 to calculate a lifetime cumulative cancer risk of  $10^{-4}$  for a daily dose of creosote corresponding to 1 ng B(a)P/kg body weight. CICAD 62 also states that this is an underestimation (perhaps by a factor of 2) and that the mixture of PAHs present in creosote seems to be five times more potent than only B(a)P.

Most of the creosote-related substances contain similar PAHs, and have also been classified as carcinogenic, and would probably also fulfil the criteria for PBT and/or vPvB. The exception is creosote, wood (CAS 8021-39-4) which has no harmonised or self-classification as carcinogenic and no known PBT or vPvB properties. It is not known by RAC whether there is reliable data showing that this substance lacks these properties (carcinogenicity, PBT/vPvB), but based on the available information it seems that there are no hazard reasons to keep

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<sup>11</sup> References related to hazard, risk assessment (data and conclusion) are available in the Renewal Assessment Report (RAR, January 2021) on creosote (<https://echa.europa.eu/documents/10162/30f74582-6977-fd42-c24f-b366e67e9c13>) supporting the BPC (Biocidal Products Committee) Opinion (December 2020): <https://echa.europa.eu/documents/10162/fc41edcf-3732-2ba9-6a14-0fb9b423fd6c>

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creosote wood in the restriction. The substance/mixture contains mainly phenolic compounds.

### 3.1.3. Emissions and exposures

#### Summary of Dossier Submitter's assessment:

The Dossier Submitter provided an estimate of the volumes of railway sleepers treated with creosote reused in the EU. It was not possible for the Dossier Submitter to quantify the emissions from creosote-treated wood (during reuse and secondary use) of PAHs with PBT and/or vPvB and carcinogenic properties. However, releases and exposure were considered likely during the entire service life of the creosote-treated wood. Therefore, the Dossier Submitter concluded that emissions from the uses in the scope are not minimised and that especially exposure of the general public to non-threshold carcinogens would need to be minimised, because creosote-treated wood is available on the market in many EU Member States.

#### RAC conclusion(s):

- RAC concludes that the manufacture, import, export, and uses of creosote-treated wood are clearly identified and described in the Background Document.
- In spite of a lack of adequate quantitative data on emissions from creosote-treated wood during reuse and secondary use, RAC supports that releases and exposure are likely to be unavoidable, during the service life of the creosote-treated wood (BPR-RAR reports provides some data on release).
- Creosote-treated sleepers are available on the market in many EU Member States resulting in a widespread potential for emissions and exposure to PAHs.<sup>12</sup>

#### Key elements underpinning the RAC conclusion(s):

RAC notes that the Dossier Submitter has performed an estimation of the reuse volumes of creosote-treated railway sleepers in the EU.

The restriction proposal does not provide any estimates of releases or emissions of PAHs fulfilling the PBT and/or vPvB criteria and having carcinogenic properties from creosote-treated wood. However, the Dossier Submitter states qualitatively that during service life leaching occurs and depends on many factors in the local environment. It is also stated that leaching will continue as long as the wood is intact and protected by creosote, and that it may continue for a long time considering a service life of at least 20 years. The BPR Renewal assessment report (RAR)<sup>13</sup> the following figures for release of creosote from treated wood: for the first 30 days there is a daily leakage of 0.366 mg/m<sup>2</sup>/day, with a cumulative leakage

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<sup>12</sup> Railway sleepers treated with creosote may be placed on the market in 23 Member States and in Northern Ireland and Switzerland.

Utility poles treated with creosote may be placed on the market in 13 Member States and in Norway and Northern Ireland.

Lists of Member States where wood treated with creosote may be placed on the market for certain uses in accordance with Commission Implementing Regulation (EU) 2022/1950  
[https://echa.europa.eu/documents/10162/988147/creosote\\_PT8\\_ms\\_lists\\_referred\\_specific\\_conditions\\_in\\_implementing\\_regulation\\_en.pdf/f029cfc8-6822-ef36-f49c-53fa555497eb](https://echa.europa.eu/documents/10162/988147/creosote_PT8_ms_lists_referred_specific_conditions_in_implementing_regulation_en.pdf/f029cfc8-6822-ef36-f49c-53fa555497eb)

<sup>13</sup> References related to hazard, risk assessment (data and conclusion) are available in the Renewal Assessment Report (RAR, January 2021) on creosote (<https://echa.europa.eu/documents/10162/30f74582-6977-fd42-c24f-b366e67e9c13>) supporting the BPC (Biocidal Products Committee) Opinion (December 2020): <https://echa.europa.eu/documents/10162/fc41edcf-3732-2ba9-6a14-0fb9b423fd6c>

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of 11 mg/m<sup>2</sup>. For 20 years of service life the leakage is 0.051 mg/m<sup>2</sup>/day, resulting in a cumulative leakage of 384 mg/m<sup>2</sup>. RAC acknowledges the limited amount of quantitative data on releases of PAHs fulfilling the PBT and/or vPvB criteria and having carcinogenic properties, but supports that releases are likely during the service life (affecting both the environment and humans) of the creosote-treated wood and that they need to be minimised. Release of PAHs from old railway sleepers is also supported by the finding of small, water-soluble PAHs in olives grown in a garden where a fence was built using old creosote-treated railway sleepers (Moret et al., 2007).

RAC notes that reuses or secondary uses that may give rise to exposure are not fully described, but it is clear from the available information that creosote-treated wood (railway sleepers and utility poles for electricity or telecommunications) can be reused if the condition of the wood allows it. As such treated wood is sold in many EU Member States, a wide variety of secondary uses resulting in environmental and direct human exposure to PAHs fulfilling the PBT and/or vPvB criteria and having carcinogenic properties are likely, and even inevitable. The implementation of reuse and secondary use practices has been reported for some EU Member States.

These secondary uses seem to mainly involve wood primarily used as railway sleepers, and sometimes utility poles. The secondary use of creosote-treated wooden utility poles for fencing, as tree support poles or in harbours and waterways, is considered limited due to the poor condition of the material at the end of its service-life as utility poles.

A WHO document (CICAD 62, 2004) mentions that "as much as 75% of creosote applied to marine pilings will remain in the wood after 40 years of service". However, RAC has not been able to scrutinise this information, but it may support that releases of creosote can continue for a long period.

CICAD 62 (2004) also mentions two studies showing the presence of PAHs (including carcinogenic benzo(a)pyrene) in old railway sleepers, with one German study measuring PAHs in five sleepers of unknown age that were used on a playground (Rotard and Mailahn, 1987) and one Canadian study measuring PAHs in at least 60 years old railway sleepers taken out of service (Gurprasad et al., 1995).

### 3.1.4. Risk characterisation

#### **Summary of Dossier Submitter's assessment:**

The Dossier Submitter could not quantify the environmental and human health risks from the reuse and secondary uses of creosote-treated wood but concluded that such risks should be minimised. Therefore, a qualitative risk characterisation was performed based on the non-threshold properties of the targeted substances.

#### **RAC conclusion(s):**

- RAC agrees that the creosote and creosote-related substances containing constituents fulfilling the PBT and/or vPvB criteria and having carcinogenic properties should be considered as non-threshold substances for the purpose of risk assessment and that a quantitative risk characterisation is not appropriate.
- RAC also agrees that emissions should be minimised and the effects of exposure to non-threshold carcinogens should be avoided. As provided in section 3.1.3, the current uses cause emissions and exposure and RAC therefore concludes that there is a risk that needs to be addressed.

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- The environmental and human health risks from the non-threshold PAHs in creosote-treated wood cannot be quantified but they are expected to be wide-spread and therefore need to be minimised by regulating distribution, reuse and secondary use of such treated wood.

### **Key elements underpinning the RAC conclusion(s):**

All uses of creosote-treated wood led to emissions of PAHs fulfilling the PBT and/or vPvB criteria and having carcinogenic properties. The initial placing on the market is regulated under the BPR. However, distribution, reuse and secondary uses of creosote-treated wood is regulated by REACH only.

Creosote is a non-threshold substance because of the PBT and vPvB and carcinogenic properties due to the composition of PAHs in the substance. Minimisation of emissions and exposure is therefore needed according to REACH. Emissions and exposure to PAHs are not quantified in the restriction report but are likely considering that leaching of PAHs may occur during the entire service life, including during distribution (transport and storage), reuse or secondary use in, e.g., in gardens and parks (see Section 3.1.3.). The general public may thus be exposed to PAHs with PBT and vPvB and carcinogenic properties, and all exposure, including dermal exposure, to creosote-treated wood should therefore be avoided. Banning the secondary use by the general public would prevent such exposure and therefore would ensure that effects are avoided. There is also potential environmental exposure to PAHs with PBT and vPvB properties that needs to be minimised.

The risk cannot be quantified, but as any exposure to these non-threshold substances should be minimised, environmental and human exposure can be minimised by regulating reuse and banning all secondary uses of creosote-treated wood. Reuse is believed to be conducted by professionals trained for the purpose and with access to information on how to protect themselves and appropriate personal protective measures (see section 3.4.2).

### **3.1.5. Existing operational conditions and risk management measures already in place**

#### **Summary of Dossier Submitter's assessment:**

No sufficient and/or effective operational conditions (OCs) and risk management measures (RMMs) were identified by the Dossier Submitter to control the identified risks, especially for the general public.

#### **RAC conclusion(s):**

RAC concludes, based on the information provided in the Background Document, that the currently recommended and implemented operational conditions (OCs) and risk management measures (RMMs) are most likely absent (for consumers), or not sufficient or effective to control the risk.

#### **Key elements underpinning the RAC conclusion(s):**

RAC is not aware of any OCs and RMMs implementable by the general public or recommended by the manufactures and/or importers that could decrease the risk during distribution, reuse or secondary use, and even if such information were provided (on the packages) when buying the products, it is most likely not available after  $\geq 20$  years of use in the environment. If reuse is restricted to the original user, information may still be available, but if reuse by other users would be allowed (requiring removal of the creosote-treated wood, transport and perhaps storage), such information will be most likely not available. In all reuse, professional

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users must make sure to apply the same risk management measures as identified in accordance with the renewal of approval of creosote as a biocidal active substance Commission Regulation (EU) 2022/1950 of 14 October 2022) (see first point of the Explanatory notes).

RAC notes that there is a risk for emissions and exposure to PAHs from old creosote-treated wood during reuse or secondary use of creosote-treated wood. The BPR regulates the placing on the market of the treated wood and requires labelling of creosote-treated wood aiming to protect human health and the environment, but it is doubtful that any information provided when the products are new will be available after  $\geq 20$  years of outdoor use.

Articles consisting of wood treated with creosote and creosote-related substances, when coming to the end of their life (discarded, intended or required to be discarded) fall within the scope of the Waste Framework Directive (2008/98/EC) and shall be considered and processed as hazardous waste. However, the existing practices in all the EU Member States are not elaborated further by the Dossier Submitter and thus not known to RAC. However, RAC notes the clarification by the Dossier Submitter that also creosote-treated wood after use in secondary applications should be treated as hazardous waste. The current restriction proposal sets special emphasis to consider wood treated with creosote or creosote-related substances at the end of its life cycle as hazardous waste and must be disposed of accordingly (incinerated).

### **3.1.6. Existing regulatory risk management instruments already in place**

#### **Summary of Dossier Submitter's assessment:**

The Dossier Submitter clarified in the Annex XV report why the existing regulatory management measures in the EU are not sufficient to control the identified risks. This took into account the lack of clarity of the current entry 31 of REACH Annex XVII, which appears to be interpreted in different ways in different Member States. Action is also needed to avoid misalignments of the entry 31 of Annex XVII with the new BPR provisions (Commission Implementing Regulation 2022/1950 of 14 October 2022). In addition, the BPR covers the first placing on the market only and not the subsequent supplies.

#### **RAC conclusion(s):**

Distribution, reuse, and secondary uses of creosote-treated wood are in principle regulated by REACH (and not by the BPR), but the wording of the current entry 31 of REACH Annex XVII is interpreted or applied differently among the EU Member States, indicating that existing regulatory management measures are not sufficient to control the risk.

#### **Key elements underpinning the RAC conclusion(s):**

The BPR regulates the treatment of wood with creosote and the supply of newly treated wood (the first placing on the market). The original proposal did not address subsequent supplies of the newly treated wood that would not be considered as secondary use or part of the second-hand market. See section 1.2 and the Explanatory notes for further information.

Distribution, reuse, or secondary uses or the second-hand market are not regulated by the BPR, hence the need for a restriction under REACH (entry 31 of Annex XVII). In theory, the current REACH Regulation should be adequate to control the risk, but there are problems with loopholes and possibilities for diverging interpretations of the wording of the entry 31 of Annex XVII. Thus, distribution, reuse, secondary uses, and second-hand market are either not regulated or are regulated differently among the EU Member States, indicating that existing



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regulatory management measures are not sufficient to control the risk.

### **3.2. JUSTIFICATION THAT ACTION IS REQUIRED ON A UNION WIDE BASIS**

#### **Summary of Dossier Submitter's assessment:**

The Dossier Submitter concluded that action is required to ensure a high level of protection at EU level, addressing the risks associated with the reuse and secondary use of wood treated with creosote and creosote-related substances, especially when it comes to exposure of the general public (e.g., consumers of goods traded on the second-hand market).

The restriction proposal submitted by the Dossier Submitter is intended to amend entry 31 of Annex XVII of REACH, to clarify it and eliminate misalignment with the latest provisions of the BPR. The Dossier Submitter finds that not all EU Member States interpret in a uniform manner the derogation of wood treated with creosote and placed on the market before 2002, which currently exist in entry 31 of Annex XVII. This is considered to result in inconsistencies of regulatory measures across the EU.

With regard to inner-EU trade, the Dossier Submitter considers there is potential for uncontrolled circulation of unlabelled and unregistered creosote-treated wood within the EEA as evidence has been found for the existence of informal sales networks for creosote-treated wood in several EU member states. The proposed Union-wide restriction is expected to eliminate the trade of creosote-treated wood across borders while also avoiding trade and competition distortions within the EU. In contrast to individual action subject to national decisions, EU-wide regulation is considered to result in a level playing field on the internal market.

#### **RAC conclusion(s):**

Based on the key principle of ensuring a high level of protection and a level playing field across the EU, RAC concludes that any necessary action to address the risks associated with the secondary use and reuse of wood treated with creosote and creosote-related substances should be implemented in the same manner by all Member States.

#### **Key elements underpinning the RAC conclusion(s):**

Currently recommended and implemented OCs and RMMs or national measures are not sufficient and effective at controlling the risk in all Member States (uneven application of the entry 31 of REACH regulation). Risk management action at an EU-wide level is needed to minimise emissions to the environment and exposure to creosote and creosote-related substances especially of the general public (e.g., consumers). In addition, this measure would ideally complement the latest BPR provisions applicable to wood treated with creosote or creosote-related substances.

#### **SEAC conclusion(s):**

SEAC agrees that action is required at Union-wide level. SEAC concludes that any necessary action addressing the risks associated with the reuse and secondary use of wood treated with creosote and creosote-related substances should be implemented in all Member States.

#### **Key elements underpinning the SEAC conclusion(s):**

SEAC notes that:

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- REACH Annex XVII, entry 31, already aims to regulate the substance on a Union-wide basis. However, the lack of clarity of the current entry 31 results in different interpretations of the legislation among the Member States.
- Furthermore, the current entry 31 is not aligned with the latest BPR provisions (2022). This is because entry 31 still allows the use of second-hand creosote-treated wood for applications that are no longer allowed under the BPR (e.g., fencing for agricultural purposes and the application in harbours and waterways). According to the latest BPR provisions, starting from 30 April 2023, the only kind of creosote-treated wood allowed to be placed on the market for the first time is wood used for railway sleepers and utility poles for electricity or telecommunications. This first placing on the market of wood treated with creosote and creosote-related substances is only allowed in those EU Member States that indicate their agreement with the use, which in turn is dependent on whether or not technically and economically feasible alternatives are available in the Member State concerned. Furthermore, Member States may in future drop out from the list of Member States allowing the BPR-related first placing on the market of creosote-treated railway sleepers and utility poles. Likewise, there may be future changes in the uses approved under the BPR. This is why future alignment of the BPR-related provisions with the restriction under REACH needs to be ensured. The proposed restriction by the Dossier Submitter establishes the required dynamic link.
- Both reuse and secondary use of creosote-treated wood takes place in the EU, and in various Member States there is widespread uncontrolled online sale of second-hand creosote-treated wood, especially railway sleepers.
- The Dossier Submitter aims to reduce the risks associated with the reuse and secondary use of creosote-treated wood by amending entry 31. Special emphasis is put on the minimisation of risk for the general public, which, due to the unclarity of entry 31, still seems to have access to creosote-treated wood traded on the second-hand market.

Considering the evidence provided, SEAC agrees with the Dossier Submitter that treated articles currently circulate within the EU and are acquired for purposes not allowed due to the lack of sufficient control over the second-hand market in the baseline. Based on the available information, SEAC thus considers that the second-hand market of wood treated with creosote and creosote-related substances is currently not adequately regulated by entry 31 of Annex XVII. SEAC concurs with the conclusion of the Dossier Submitter that uncontrolled distribution of treated wood throughout the Union can be limited considerably by the new proposed restriction, ensuring a harmonised and high level of protection across the Union. SEAC also agrees that, given the latest changes in the BPR provisions, the new restriction proposal should aim to allow, under specific conditions, the reuse of creosote-treated wood only for the purposes allowed under the BPR at the time at which reuse occurs.

SEAC considers that Union-wide action is justified based on the lack of clarity of the current entry 31 of REACH Annex XVII and the need to resolve the current misalignment of the existing restriction with the latest BPR provisions (Commission Implementing Regulation 2022/1950 of 14 October 2022). In fact, it can be noted that both of these existing regulatory EU-wide measures form the current regulatory baseline. SEAC considers that a solution to the unclarity and misalignment of the existing restriction should likewise be implemented at EU level.

When comparing the merits of national and Union-wide regulation, it can be expected that a Union-wide measure addressing the subsequent reuse and secondary use of treated wood will

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create better harmonisation of regulation in the group of Member States that allows the use of the substances. However, going beyond this benefit, an EU-wide measure is also expected to considerably reduce the uncontrolled distribution of creosote-treated wood throughout the rest of the Union (and thus uncontrolled exposure of humans and the environment). This is because an EU-wide restriction can address the need to limit the trade from a Member State that allows the first use in the context of the BPR to those Member States that do not (anymore) allow the first placement on the market due to the availability of suitable alternatives. SEAC thus agrees that by prohibiting secondary use and by limiting the reuse exclusively to the uses currently approved in the BPR and in the same Member State, the risks will be addressed in a harmonised manner across those Member States that are on ECHA's list of Member States which allow the use of creosote as biocidal product.

### 3.3. ANALYSIS OF ALTERNATIVES

#### 3.3.1. Availability and technical and economic feasibility of alternatives

##### Summary of Dossier Submitter's assessment:

With regard to the Dossier Submitter's approach to the analysis of alternatives, it should be noted that the analysis of and conclusion on the applicability of chemical and non-chemical alternatives as suitable alternatives to creosote is heavily derived from the assessment performed in the context of the BPR. The BPR-related analysis of alternatives already looked at alternatives available for creosote for the treatment of wood, which are the same alternatives that are also considered relevant for reuses and secondary uses of treated wood.

In terms of scope, the analysis of alternatives presented in the context of this restriction proposal mainly focuses on the reuse of creosote-treated railway sleepers. This is because the condition of creosote-treated utility poles is reported to be too poor in most cases to allow further reuse after their first use and extraction. Thus, it was considered that there should not be a need to find alternatives specifically for the reuse of utility poles. Moreover, the ban of all secondary uses is already considered justifiable as per the BPR-related alternative assessment. This assessment resulted in the withdrawal of the legal basis for the placing on the market of creosote-treated wood for all other uses than railway sleepers and utility poles. In other words, as the use of freshly creosote-treated wood for these other uses is not allowed due to the availability of suitable alternatives, it can be considered that the transition to technically and economically feasible alternatives is also possible in the context of secondary uses of recycled railway sleepers and utility poles<sup>14</sup>.

In terms of the technical performance requirements of alternative substances or technologies, the Dossier Submitter reports a service life of more than 30 and up to 60 years for railway sleepers and utility poles. The service life (or durability) in turn can be affected by several factors, such as natural decay processes, but also resistance to temperature and humidity fluctuations. In addition, the Dossier Submitter considers the compatibility of alternatives with existing characteristics of the use location (e.g., weight, conductivity and other factors relevant from an engineering point of view). Economic considerations consider the costs of

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<sup>14</sup> In the context of uses of creosote-treated wood other than for railway sleepers and utility poles, it is useful to note that not only the recycling of creosote-treated railway sleepers and utility poles for such purposes is restricted, but also the reuse of creosote-treated wood specifically marketed for these uses in the past is meant to be banned by the Dossier Submitter's proposed restriction. Alternatives for this type of reuse are likewise considered to be covered by the BPR-related analysis of alternatives.

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using alternatives which include installation costs, monitoring costs, intervention costs, and tamping costs.

Different chemical and non-chemical alternatives to creosote and creosote-treated wood have been identified, some of which are already commercially available on the market and partly also used already. One of the most promising **chemical alternatives** was identified to be copper hydroxide (incl. copper-water-based wood preservatives, e.g., Tanalith E and Impralit, and copper-oil-based wood preservatives, e.g., Tanasote S40) because it is reported to be relatively affordable. However, there are remaining doubts about technical feasibility in terms of comparable durability. **Non-chemical alternatives** include concrete or reinforced concrete, steel, and composite plastic. Concrete material is reported to be an alternative already widely used for utility poles and for railway sleepers; however, responses to the consultation on the Annex XV report indicate that, especially in the case of railway sleepers, the economic feasibility of further expanding the use is in question. The use of concrete sleepers may require costly modifications in order to accommodate this kind of sleepers on the track and possibly increased maintenance activity. In some locations, the track location or design may not be suitable at all for the use of concrete. The price of composite plastic is also reported to be a concern as it is indicated that the price is four times higher than for wood.

Furthermore, current and future decisions concerning creosote approval and conditions for marketing of creosote-containing products at European or national level, directly affect the availability and users' choice of alternatives in the context of reuse. The availability of **new creosote-treated wood** plays an important role for railway sleepers because it means that railway companies in some countries can substitute the reuse of treated sleepers with the acquisition of newly treated sleepers. The renewed approval of creosote as an active biocidal substance was granted in 2022 and creosote-containing biocidal products may thus be allowed by EU Member States for impregnation of railway sleepers and utility poles where no suitable alternatives are available in the national context.

In regard to the adoption likelihood of the different alternatives, the assessment is impacted by considerable uncertainties. The use of concrete sleepers (and utility poles) was reported to be widespread already, yet the Dossier Submitter finds limited potential for this alternative to spread further in the context of use as sleepers. This is because concrete is not considered technically and economically feasible for all users and/or all use cases (e.g., specific tunnels, bridges, tight curves, switching points, low traffic lines or areas of temperature and humidity fluctuations). In contrast to this, a lighter material like wood is considered the more suitable option from technical and economic point of view. The Dossier Submitter considers new creosote-treated wood to be a likely used alternative to the reuse of creosote-treated railway sleepers in relevant EU Member States. This is based on the durability and cost at the time of dossier development. However, at the time of dossier preparation, it was not clear yet how many and which Member States would continue to allow the placing on the market of creosote for use on sleepers and utility poles at national level. It is stated that, if the reapproval of the creosote use under the BPR had not come into effect, copper hydroxide could have become an important alternative. Previously, chemical alternatives to creosote impregnation (e.g., water- or oil-based copper hydroxide products) seem to have been considered less attractive due to limited commercial availability, lower wood protection potential, higher prices, or other effects such as ignitability, conductivity or similar risk profile. Yet, the Dossier Submitter considers that chemical alternatives show potential to become preferred alternatives as research and development efforts continue and economies of scale (resulting from increased adoption) may lower their price. For the time being, the Dossier Submitter also seems to see potential to composite plastic sleepers, which could be considered more user-friendly than

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concrete and more durable than copper hydroxide, yet more expensive than new creosote-treated wood.

A transitional period of 12 months after entry into force of the proposed restriction is proposed by the Dossier Submitter.

### **SEAC conclusion(s):**

SEAC concurs with the Dossier Submitter that the potential chemical and non-chemical alternatives that will be suitable for replacing the reuse and secondary use of wood treated with creosote will be the same as the alternatives identified for the placing on the market of creosote-treated articles in the context of the BPR assessment. However, as indicated in the considerations of the renewed approval of creosote under the BPR ((EU) 2022/1950)<sup>15</sup>, the available alternatives may have technical or economic implications that make them less feasible under specific circumstances in some Member States. SEAC agrees with the analysis of the Dossier Submitter, finding that, in such cases, new creosote-treated wood for the use as railway sleepers or utility poles will still be available in these Member States. Thus, SEAC concludes that alternatives are available in all cases.

SEAC finds that some uncertainty remains with regard to which types of alternatives will be adopted for the reuse of creosote-treated sleepers (concrete, wooden, steel, composite plastic) and, in case wooden sleepers will be installed, it is uncertain which treatment will be used (creosote or copper-based). Given the renewal of the approval of creosote under the BPR, railway companies formerly installing second-hand sleepers may either install new creosote-treated wood or may opt for safer alternatives. Despite the uncertainty, SEAC agrees with the Dossier Submitter that the use of new creosote-treated wood may be the most likely alternative for the re-users in those Member States that continue to allow the use of new creosote-treated wood, as the other alternatives analysed under the BPR are not yet considered technically and economically feasible or commercially available in all cases. This may decrease the risk reduction potential of both restriction options (but more so of RO1 because it bans reuse even by the original user in the same Member State).

For the case of secondary use of creosote-treated articles for other applications, it also remains unclear which alternatives will be adopted, but it is certain that new creosote-treated material is not allowed for these applications. SEAC notes that the analysis of alternatives considered in the context of the renewed approval of creosote under the BPR resulted in the outcome that new creosote-treated wood is not allowed anymore to be used for any other purpose than railway sleepers and utility poles, thus alternatives have been found to be adequate for these other uses. Based on the BPR assessment, the Annex XV dossier provides some information on alternatives for utility poles, equestrian and agricultural fencing, agricultural posts/stakes and hop poles. Thus, SEAC assumes that suitable alternatives are available for the relevant applications, although details cannot be evaluated based on the

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<sup>15</sup> Consideration (13) Regulation (EU) 2022/1950: Alternatives to wood as a material for utility poles exist, including steel, concrete, fibreglass, composite materials or composite barrier sleeves installed around treated wooden utility poles. Each of these alternatives presents advantages (for example, rigidity; invariant physical characteristics; fire retardancy) and disadvantages (for example, the need for further testing; possible shorter service life or other technical concerns; more expensive when compared to wooden poles). Another alternative is the laying of transmission cables underground, in particular in urban and city environments, although this option may become more technically challenging depending on the natural terrain across which the network must traverse (for example, remote areas or mountains), and an installation and maintenance may appear more complex, costly and not feasible in all circumstances. A non-renewal of approval of creosote for use in wooden poles might create an economic impact on electricity and telecommunication infrastructure operators, and problems for the maintenance of certain transmission cables (for example, areas not easily accessible, rapid response in case of serious storms) in some Member States where substitution with other materials or underground transmission cables would be technically or economically difficult for the moment.

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provided information.

SEAC supports a short transitional period of 12 months as proposed by the Dossier Submitter.

### **Key elements underpinning the SEAC conclusion(s):**

#### Scope of the analysis

SEAC is aware that substitution mainly plays a role for those stakeholders for whom reuse is not allowed anymore and for all secondary uses. Reuse is not allowed under Restriction Option 1 (RO1), but it is still allowed in Restriction Option 2 (RO2) for railway sleepers and utility poles for the original user and in the same Member State. SEAC therefore considers that the proposed restriction will not affect the original users' practice of reusing their own material. The Dossier Submitter substantiated that reuse mainly takes place for railway sleepers and that these sleepers are reused on low traffic lines, sidings and service facility tracks and on private sidings and tourist railroads. The restriction proposal (RO2) implies that reuse will only take place by the larger national railway companies (i.e., the original users of treated sleepers) and not by the smaller ones that reuse sleepers from other entities, e.g., private companies and tourist lines.

#### Approach to the analysis of alternatives

SEAC notes that the Dossier Submitter based their assessment mainly on documents produced during the re-assessment of the approval of creosote under the BPR and some documents produced earlier for the French national railways, which primarily focused on the railway application. SEAC is of the opinion that focussing more on the specific applications rather than on alternatives to new creosote treatment (as assessed in the context of the BPR) would have facilitated the analysis of alternatives, specifically for those applications where secondary use takes place.

#### Performance requirements of alternatives and consequences of lower performance

Performance is mainly described in terms of service life. SEAC notes that the Dossier Submitter reports a service life of 30 years at the very minimum and up to 60 years for newly creosote-treated railway sleepers. For reused creosote-treated sleepers, the Dossier Submitter indicates that the durability would still be between 20 and 30 years. It cannot be excluded that a lower performance level in terms of durability may generally be acceptable for some users if increases in the frequency of control, maintenance, and replacement, and thus cost, can be accommodated. SEAC notes that safety of the use of railway tracks does not necessarily seem to be a predominant concern in the Dossier Submitter's assessment of alternatives. SEAC notes that the Dossier Submitter further considers the compatibility of alternatives with existing characteristics of the railway track (e.g., weight, conductivity and other factors relevant from an engineering point of view). The Dossier Submitter does not define a concrete level of compatibility that needs to be achieved. However, it is clear to SEAC that low technical compatibility of an alternative would result in costs that may render the operation of the track unsustainable at some point (if very far-reaching adjustments would be required to make alternatives compatible with the track).

SEAC concludes that the presented performance requirements can be considered relevant and as far as concrete levels have been reported, they are justified.

#### Identification of alternatives

SEAC concurs with the Dossier Submitter that reuse and secondary use of creosote-treated wood are mostly relevant in relation to railway sleepers, as reuse or secondary use of the other applications is expected to be less likely because the deterioration of the treated wood

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in these application over time is higher.

In Table C-1 of the Annex XV report, the Dossier Submitter provides some general as well as some more detailed qualitative information on the identified alternatives to creosote-treated wood. The available information on alternatives is summarized in Table 3.

SEAC considers that the Dossier Submitter's list of identified alternatives covers all relevant uses of wood treated with creosote and related substances and that the list can thus be considered complete given the scope of the assessment.

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**Table 3: Overview of alternatives mentioned in the Annex XV dossier (mainly based on Table C-1)**

Original use	Type of subsequent use	Context of subsequent use	Alternatives identified
Railway sleeper	Reuse	Railway sleeper	<ul style="list-style-type: none"> <li>• New creosote-treated wood (available in 23 out of 27 MS + in Northern Ireland and Switzerland)</li> <li>• Copper hydroxide or other copper-based products on wood (different products, under development)</li> <li>• Composite plastic (under development)</li> <li>• Concrete or reinforced concrete (would require modification of track superstructure)</li> <li>• Steel (would require modification of track superstructure)*</li> <li>• Untreated tropical wood (much shorter service life)*</li> </ul>
	Secondary use	<p>Agricultural and equestrian fencing</p> <p>Agricultural poles/posts/stakes (e.g., hop poles)</p> <p>Wood used in harbours and water ways</p> <p>Landscaping</p> <p>Potential other uses</p> <p><i>Some secondary uses with high potential for exposure are already considered sufficiently restricted by entry 31 (e.g., uses indoors, in toys and on playgrounds, with food contact or</i></p>	<p><i>Not assessed in the restriction proposal. Generally, alternatives have been identified in the context of the BPR assessment and have been found suitable.</i></p> <p><i>New creosote-treated wood will not be an alternative for the subsequent uses mentioned.</i></p>



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		<p><i>as garden furniture).</i></p> <p><i>However, entry 31 includes a derogation for the placing on the second-hand market of wood treated before 2003.</i></p>	
Utility pole	Reuse	Utility pole	<p><i>Not assessed in much detail in the restriction proposal because reuse of utility poles is considered unlikely even in the baseline scenario, and thus the proposed restriction should not prompt the need to find a suitable alternative.</i></p> <ul style="list-style-type: none"> <li>• New creosote-treated wood (available in 13 out of 27 MS + Norway and Northern Ireland)</li> <li>• Copper hydroxide or other copper-based products on wood (different products, under development)</li> <li>• Composite plastic (under development)</li> <li>• Concrete or reinforced concrete</li> <li>• Steel</li> </ul>
	Secondary use	<p>Unknown</p> <p><i>Some secondary uses with high potential for exposure are already considered sufficiently restricted by entry 31 (e.g., uses indoors, in toys and on playgrounds, with food contact or as garden furniture).</i></p> <p><i>However, entry 31 includes a derogation for the placing on the second-hand market of wood treated before 2003.</i></p>	<p><i>Not assessed in the restriction proposal. Generally, alternatives have been identified in the context of the BPR assessment and have been found suitable.</i></p> <p><i>New creosote-treated wood will not be an alternative for the subsequent uses mentioned.</i></p>
Other applications	Reuse	Same applications	<i>Not assessed in much detail in the restriction proposal.</i>

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(agricultural and equestrian fencing, agricultural poles/posts/stakes (e.g., hop poles), wood used in harbours and water ways			<p><i>Generally, alternatives have been identified in the context of the BPR assessment and have been found suitable.</i></p> <p><i>New creosote-treated wood will not be an alternative for the subsequent uses mentioned.</i></p> <ul style="list-style-type: none"> <li>• Copper hydroxide or other copper-based products on wood (different products, under development)</li> <li>• Composite plastic (under development)</li> <li>• Concrete or reinforced concrete</li> <li>• Steel</li> <li>• Potential other alternatives, depending on the specific use</li> </ul>
	Secondary use	<p>Unknown</p> <p><i>Some secondary uses with high potential for exposure are already considered sufficiently restricted by entry 31 (e.g., uses indoors, in toys and on playgrounds, with food contact or as garden furniture).</i></p> <p><i>However, entry 31 includes a derogation for the placing on the second-hand market of wood treated before 2003.</i></p>	<p><i>Not assessed in the restriction proposal. Generally, alternatives have been identified in the context of the BPR assessment and have been found suitable.</i></p> <p><i>New creosote-treated wood will not be an alternative for the subsequent uses mentioned.</i></p>

\* Seem less relevant because only briefly mentioned in the Annex

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### Assessment of availability and technical and economic feasibility of alternatives

The analysis of the Dossier Submitter mainly focuses on reuse and secondary use of sleepers and utility poles. For consideration of the alternatives, the applications for which these second-hand railway sleepers and utility poles are used as indicated in column 3 of Table 3 above have been taken as a starting point. A quantitative analysis was restricted to the reuse of creosote-treated sleepers. The use of second-hand material for all other applications, including utility poles, is presented qualitatively and mainly contained in Table C-1 of the Annex XV dossier, a summary of which has been provided in Table 3. Additional information on the availability and the technical and economic feasibility was provided in the third-party consultation on the Annex XV report (e.g., #3948). The Dossier Submitter concluded that, within the scope of the proposal, the various alternatives as mentioned under the BPR are not considered technically and economically feasible or already available. Therefore, the Dossier Submitter considered primary use of freshly creosote-treated wood to be the only socio-economically available alternative to reuse while waiting for socio-economically suitable and affordable chemical and non-chemical alternatives for wood treated with creosote. SEAC does not concur with that conclusion in general. The summary provided in Table C-1 of the Annex XV dossier suggest that most of the alternatives are technically feasible although it is not always made clear whether they are also technically feasible under all circumstances. For instance, concrete sleepers cannot easily be used on switches, bridges and in tunnels. Unfortunately, the technically feasible alternatives for these specific circumstances are not mentioned in the Annex XV dossier. The consultation on the Annex XV report delivered some additional information which suggests the availability of technical feasible alternatives for railway sleepers and poles.

The Dossier Submitter notes differences in the technical applicability of the alternatives among the Member States related to their geographical conditions. The renewed approval of creosote under the BPR (Regulation (EU) 2022/1950) mentions, for instance, Member States where installation and maintenance of the electricity and telecommunication infrastructure may appear more complex, costly and not feasible under all circumstances in case of non-approval of creosote. SEAC is of the opinion that these specific cases and the geographic conditions could have deserved more attention as they determine the possibility of replacement.

Although the number of second-hand sleepers used for fencing and tree stakes (secondary use) is not known, the Annex XV report (Table B-1) indicates that 35% of the creosote used in the EU is dedicated to these two applications, suggesting that the number of sleepers used for these purposes may also be considerable. Some data on secondary use of railway sleepers is presented in the Annex XV report, but no quantitative data was available to the Dossier Submitter. Information on alternatives for the other uses (e.g., agricultural and equestrian fencing, poles/posts/stakes, wood used in harbours and water ways and landscaping) in the Annex XV dossier is limited to qualitative information and does not provide insight in the market penetration of these alternatives. Several alternatives, such as concrete, steel, composite plastic and copper-salt-based preserved wood poles, are available on the market, whereas others are still under development (e.g., Copper-oil-based wood preservatives). SEAC notes that analysing these markets may be a challenge and concurs with the approach of the Dossier Submitter, assuming that the alternative analysis performed under the BPR for new creosote-treated wood would be sufficient to establish the availability and the technical and economically feasibility of alternatives. As no approval was given to the use of new creosote wood for these applications, SEAC concludes that alternatives are available and technically and economically feasible for these applications.

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The Annex XV dossier contains a limited amount of information on economic feasibility. The overview in the Annex XV dossier makes clear that most alternatives are more expensive to purchase than the second-hand railway sleepers and that for concrete-treated sleepers even reconstruction of the railway track would be necessary. Concrete is considered not to be an economically feasible alternative. In contrast, the Dossier Submitter considered primary use of creosote-treated wood to be the only socio-economically available alternative to secondary-use, whereas the substitution based on new wooden sleepers treated with copper hydroxide could result in affordable economic impacts. The Dossier Submitter hardly expected effects of the substitution on the national railways but indicated considerable uncertainties in concluding on the private railway companies. Similar thoughts were conveyed in the consultation on the Annex XV report. The Dossier Submitter considered it likely that substitution to composite plastic sleepers or wooden sleepers treated with copper hydroxide could generate significant additional costs for the private railways. Therefore, purchase of new creosote-treated sleepers in these Member States where this is still allowed is plausible but may also be accompanied by increased purchasing costs compared to reuse of sleepers. SEAC notes that, while the SEAC guidance on economic feasibility<sup>16</sup> states that there is no specific threshold below which any increase in costs can be considered economically feasible, this is not the same as saying any increase in costs is economically infeasible. SEAC therefore considers that alternatives should be economically feasible despite the increase in prices.

SEAC regrets that the destination of the second-hand sleepers has been chosen as starting point for the analysis of alternatives rather than the applications that use the second-hand sleepers. Taking the function and/or the application would possibly have provided more insight into the possible alternatives and the limitations. For example, comment #5167 indicated that the alternative to reuse was incineration and that they still are searching for alternatives to creosote poles. In quite some Member States underground transmission lines are used for electricity transmission although there may be exemptions where the poles are still necessary. Generally, SEAC lacks insight in such considerations for the railway sleepers, the poles but also for the other applications.

### Comments from the third-party consultation on the Annex XV report and comments on the SEAC draft opinion

The third-party consultation did indicate a preference for reuse of railway sleepers by the French tourist lines organisation (comment #3753) but unfortunately, they did not provide information on the most suitable alternative sleepers and on the associated socio-economic aspects.

The German DB Netz AG indicated not to reuse creosote sleepers, their removed sleepers are incinerated (comment #3819), which suggests that alternatives are used on their lines.

The Swiss railways (comment #4295) uses concrete and steel sleeper as an alternative, where technically feasible. They further mention polymeric sleepers and wood treated with copper oil but indicate that field tests are still ongoing to find an economical and functional alternative. They indicate that the use of copper as a preservative may hinder the biochar production through pyrolysis of the discarded railway sleepers because of the residual presence of copper in biochar (comment #4295).

In the third-party consultation (comment #3948), the German Competent Authority indicates that in Germany alternatives have replaced creosote railway sleepers in all use situations (including rail track, tracks switches and bridges), which suggest that even in these situations

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<sup>16</sup> [https://echa.europa.eu/documents/10162/17091/seac\\_authorisations\\_economic\\_feasibility\\_evaluation\\_en.pdf](https://echa.europa.eu/documents/10162/17091/seac_authorisations_economic_feasibility_evaluation_en.pdf)

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alternatives are currently available. Alternatives mentioned are untreated oak wood sleepers and recycled polymers and Fiber-Reinforced Foamed Urethane sleepers (FFU). The plastic sleepers were shown to be economically feasible for the national railway company but comment #3948 indicated that the situation for private/touristic railway networks in Germany might be different.

In their comments on the SEAC draft opinion (comment #1240), the German Competent Authority further specified the following needs and possibilities: "In 2020 the DE CA organised a meeting with railway companies and associations in which it was discussed that railway sleepers from concrete and plastic are viable alternatives in Germany. According to information brought forward in this meeting, plastic railway sleepers are more expensive than concrete railway sleepers and are only used when the use of concrete railway sleepers are not possible. Wooden railway sleepers are needed on bridges as vibration damping on structures and have advantages during repair work as single sleepers can be replaced without major technical effort and suffer low damage in the event of derailments. Nowadays, creosote-treated railway sleepers are mainly installed during single sleeper replacement, when individual sleepers of a track section have to be replaced. In such cases, the replacement of individual sleepers with a sleeper made of a different material remains problematic due to the different stiffness of the material: the stiffer sleeper wears out much faster. A mix of materials can be used for 1-2 years as a transitional option if the tracks are to be rebuilt afterwards. If the track section is planned to be used for another 15-20 years, an individual replacement with a wooden sleeper is more feasible." Amounts of reuse have not been provided.

A user of creosote-treated wood commenting on the SEAC draft opinion mentioned some technical issues for not replacing wooden sleepers in a number of niche applications as well some economic considerations. As in the German comment, the light weight and flexibility were mentioned as well as their use in temporary support.

One national DSO (comment #5167) is exploring all alternative options available for their utility poles with a view to moving away from the use of creosote-treated wood poles on its network ahead of the deadline of October 2029 for new creosote wood. They are running trials, but these have not yet resulted in an immediately viable alternative. They indicated that the alternative to secondary uses of poles would be to dispose of the pole as hazardous waste, with limited advantage for the environment, difficulties with immediate or short-term accommodation to the disposal of all poles and huge cost implications because the poles have to be transported to Great Britain.

The German authority (comment #3948) indicates that new creosote wood is not used anymore for utility poles, however, Germany does not communicate on the alternative being used instead.

Information submitted during the third-party consultation indicates that creosote-treated utility poles have been replaced by other means of transport (comment #3948), which makes SEAC believe that substitutes are generally available, and technically and economically feasible.

### Most likely adopted alternative

The Dossier Submitter concludes that the use of new creosote-treated wood is currently the only socio-economically available alternatives to reuse while waiting for economically suitable and affordable chemical and non-chemical alternatives of wood treated with creosote. This is based on the high durability and comparatively lower cost at the time of the development of the restriction proposal. However, the use of freshly treated wood may not be available in all Member States, depending on whether the Member State opts in for the continued first placing

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on the market of creosote-treated wood (for railway sleepers and/or utility poles) within the BPR.

The analysis of alternatives by the Dossier Submitter also indicates that the development of copper hydroxide as an affordable alternative with sufficient performance is considered less likely in the coming years given the recent reapproval of creosote by the BPR. It is stated that, if the reapproval of the creosote use under the BPR had not come into effect, copper hydroxide could have become an important alternative. SEAC notes, however, that the Annex XV report has not analysed by means of a survey whether the managers in charge of the railway tracks may seek to replace the old creosote-treated wood by safer alternatives or by new wood freshly treated with creosote. Furthermore, it seems that the Dossier Submitter does not completely discard copper hydroxide as a suitable alternative and seems to see promising development possibilities for this alternative in the future as research and development efforts continue and economies of scale (resulting from increased adoption) may lower their price.

The replacing of wooden sleepers with concrete sleepers on less frequently used railway lines is not considered feasible by the Dossier Submitter from an economic perspective due to additional and costly construction measures that would have to be implemented to support the installation of concrete sleepers and the possibly increased need for maintenance. The use of concrete sleepers (and utility poles) was reported to be widespread already, yet the Dossier Submitter seems to find limited potential for this alternative to spread further in the context of use as sleepers. The Dossier Submitter indicates that concrete sleepers are heavier and less resistant to temperature and humidity fluctuations than wooden sleepers. The limited economic feasibility is considered to apply more significantly to the tourist lines than to high traffic lines, but this could be better substantiated. The service life of 40 years for concrete and steel suggest that costs is the main disadvantage for these alternatives. The Dossier Submitter also indicates that the replacement of creosote wood railway sleepers may not be possible on railway tracks in all cases and mentions the difficulties in using concrete sleepers for specific tunnels, bridges, tight curves and switching points.

With regard to composite plastic sleepers, the Dossier Submitter's assessment seems to come to an overall positive conclusion, indicating that this type of alternative could be a promising substitute for the reuse of creosote-treated sleepers. This alternative represents a durable but lighter material which is considered the more suitable option from technical and economic point of view.

SEAC agrees with the Dossier Submitter that copper hydroxide products or plastic composite sleepers appear to be potential alternatives to creosote sleepers, the latter being considered as the potentially best alternative. The plastic composite sleepers could be considered more user-friendly than concrete and more durable than copper hydroxide, but yet still more expensive than new creosote-treated wood.

For secondary-use applications, the analysis does not provide quantitative information, neither does it conclude on which alternative will most probably be chosen. Both the Annex XV dossier and the comments on the Annex XV report make clear that secondary uses currently exist. The German Competent Authority pointed out that soil contamination was caused by imported hop poles (for hop growing) impregnated with tar oil in the county of Bavaria and indicated that there seems to be reports of old railway sleepers installed as slope supports, fence posts or other construction elements (comment #3948). The French national railway infrastructure manager (NRIM) indicated secondary use as support of embankments (comment #3797). As creosote has not been approved for these applications, newly creosote-treated wood will not be an alternative. However, it remains unclear which alternative will be

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adopted. Although SEAC believes that sufficient alternatives exist for most of these applications, these markets could have been better scrutinised in the Annex XV dossier concerning the market penetration of alternatives and the limitations.

Overall, SEAC concludes that the assessment of the adoption likelihood of the different alternatives is impacted by considerable uncertainties. However, SEAC concurs with the Dossier Submitter that the potential chemical and non-chemical alternatives that will be suitable to replace the reuse and secondary use of wood treated with creosote and related substances will be the same as the alternatives identified for the first placing on the market of creosote-treated articles in the context of the BPR assessment. SEAC agrees with the analysis of the Dossier Submitter, finding that, where non-creosote alternatives are not ready yet, new creosote-treated wood for the use as railway sleepers or utility poles will still be available in these Member States. Thus, SEAC concludes that alternatives are available in all cases. This has been confirmed by comments received during the consultation on the Annex XV report.

### Transitional period of the restriction

SEAC agrees with the Dossier Submitter that a long transitional period is not necessary. SEAC therefore supports the 12 months proposed by the Dossier Submitter.

As mentioned before, the BPR only re-approved new creosote-treated wood for railway sleepers and utility poles, but not the other applications that were previously approved. This suggests that, for these applications, sufficient alternatives to newly creosote-treated wood were considered to be available. These alternatives will also be available where second-hand creosote wood has been applied for the same applications (e.g., fencing, agricultural stakes, hop poles). Therefore, SEAC considers that a 12-months transition period, as proposed by the Dossier Submitter, will be sufficient to transfer to safer alternatives for the applications subject to secondary use.

SEAC considers that for stakeholders that will not be able to purchase second-hand creosote wood the time needed for the acquisition of new creosote-treated sleepers instead of reusable sleepers should not be longer than 12 months. It should also be noted that the restriction would not require removal of treated wood that is still in use in its location at the time of entry into force of the restriction. As indicated in Figure 4, the restriction only applies when treated wood is subjected to reuse or secondary use.

Regarding the ban of placing on the market of treated wood for secondary uses, there should not be a long time period needed for the halt of these practices. The availability of suitable alternatives for second-hand uses of creosote-treated wood is considered to justify such a short transitional period. SEAC considers it preferable to interrupt such practices as soon as possible.

SEAC overall concludes on basis of the Annex XV report, the comments received during the consultation on the Annex XV report (comment #3948) and the BPR approval for creosote-treated wood that alternatives are commercially available and technically and economically feasible and that a 12-month period would be sufficient to implement the proposed restriction.

One user of creosote-treated wood commented in the third-party consultation on the SEAC draft opinion (comment #1241) that it considers 12 months to be short, especially for railway sleepers. As Greece has not registered for the use of new creosote railway sleepers under the BPR, this restriction on second hand railway sleepers will become effective for the stakeholder 12 months after the entry into force, which may lead to insufficient maintenance of the rail network. However, SEAC did not receive any data on the amount of stock of railway sleepers nor on the time needed to implement any alternatives.

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The Northern Ireland Electricity (NIE) Networks indicated in their comments (comment #1244) to the SEAC draft opinion that it considers 12 months too short for proper management and disposal of waste generated as a result of the restriction and pleads for an extension to 36 months. Currently, a large amount of electricity poles is destined for secondary use. SEAC believes that the current proposal may indeed lead to a larger amount of utility poles to be disposed of, accompanied by increasing costs, but also expect a decrease in chances that the poles reach the general public. SEAC doubts whether a 36-months transition period would solve the problem of the volume of wood poles to be disposed of by an increase in hazardous waste facilities. The extra two years lead to an extra amount of 2 x 7700 utility poles used for secondary uses compared to the original proposal, and SEAC questions whether this postponement would result in a larger hazardous waste incineration capacity. SEAC keeps to its earlier conclusion that 12 months transition period would be sufficient.

### **3.3.2. Risk of alternatives**

#### **Summary of Dossier Submitter's assessment:**

The Dossier Submitter has not re-assessed alternatives (and their risks) in detail but refers to the BPR. Based on the BPR assessment, the Dossier Submitter concluded that the main alternative is still to be considered freshly creosote-treated wood. According to the Dossier Submitter's specifications for alternatives, a suitable alternative should not be classified to have CMR or endocrine disrupting properties.

#### **RAC conclusion(s):**

- There are different chemical and non-chemical alternatives for different uses, but creosote is the mostly used substance for newly treated wood. As the content of creosote (i.e., PAHs) in the wood is expected to decrease with time (e.g., due to leakage), the potential risk from newly treated wood is generally higher than from old wood treated with creosote (this general rule of thumb would not apply if the wood is handled incorrectly by someone not trained or not following the safety measures to be applied).
- Risk of alternatives to creosote has been discussed under the Biocidal Product Regulation and the risk assessment of alternatives has not been conducted in this restriction proposal.

#### **Key elements underpinning the RAC conclusion(s):**

The approval of biocidal active substances and authorisation of biocidal products for wood protection is a responsibility of the BPR. As the authorisation of biocidal alternatives to creosote lies on the BPR (and not REACH), the Dossier Submitter has not re-assessed alternatives in detail but refers to the biocidal alternatives' assessment to the BPR (Opinion on the application for renewal of the approval of the active substance ECHA/BPC/274/2020). At present, the BPR has approved 28 chemicals for wood protection, but only few of them are possible alternatives for creosote. The restriction report concludes that although alternatives for railway sleepers and utility poles include copper-based preservatives, concrete, steel, and plastics, there may not be a drop-in alternative in all use contexts. According to the restriction report and SEAC's evaluation, the known alternatives may be considered either not yet fully developed, less flexible in use, and more expensive (Table C-1 of the restriction report). In many cases, the technically and economically most feasible alternative that remains available is wood newly treated with creosote.



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Copper-based preservatives may be affordable but may have technical drawbacks. If they would be introduced, copper is much less toxic to humans, for instance by not being carcinogenic. However, copper may be toxic to the environment, depending on the amount released from the wood.

Overall, if restricting wide-spread reuse of creosote-treated wood (mainly sleepers), the most realistic alternative seems to be use of wood newly treated with creosote in line with the BPR-approval of creosote. RAC supports the conclusion that environmental emissions from new creosote-treated wood can be expected to be higher compared to reused creosote-treated wood. Exposure to creosote and thus the risk could increase unless the workers apply appropriate risk management measures (see section 3.4.2).

### **3.4. JUSTIFICATION THAT THE SUGGESTED RESTRICTION IS THE MOST APPROPRIATE EU WIDE MEASURE**

#### **Summary of the proposed restriction**

Creosote-treated wood is already subject to some regulatory provisions. The first placing on the market of creosote-treated wood (incl. import) is in the remit of the BPR regulation. The subsequent placing on the market is in the remit of REACH and is currently regulated by entry 31. The risks identified by the Dossier Submitter (as a result of the insufficient alignment of entry 31) are intended to be addressed by the proposed restriction.

Two different restriction options (ROs) have been assessed by the Dossier Submitter:

- RO1: Ban on all reuses and secondary uses of creosote-treated wood authorised under BPR and already placed on the market;
- RO2: Ban on all secondary uses of creosote-treated wood authorised under BPR and already placed on the market with reuses being allowed solely for the same use as the original use, in the same country, under similar conditions and by the same original user.

Both RO1 and RO2 are considered to entail positive environmental and human health impacts compared to the baseline by eliminating all secondary uses, which are especially relevant for exposure of the general public. Both RO1 and RO2 yet allow residual risk for the environment and human health, as the risk of the original use would stay unchanged. The extent to which the residual risk of RO2 is expected to differ from that of RO1 is considered to be strongly affected by the availability of alternatives. The possibility to use newly creosote-treated wood as an alternative to reuse, would reduce the advantage of RO1 in terms of risk reduction. Since newly treated wood is indeed expected to be available as an alternative, the Dossier Submitter considers that RO1 would likely increase the use of newly creosote-treated wood more than RO2 and chooses RO2 as the preferred restriction option (also taking into account qualitative socio-economic arguments and principles of recycling and circular economy). A transitional period of 12 months after entry into force of the proposed restriction is proposed by the Dossier Submitter.

The proposed restriction includes the following conditions:

- Ban of the placing or making available on the market (incl. import) of all creosote-treated wood with the active substance creosote and substances covered by the entry 31 at the exemption of creosote (Grade B and Grade C creosote as specified in European Standard EN 13991:2003, EC:232-287-5, CAS: 8001-58-9) specifically approved under BPR.

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- Creosote-treated wood will be allowed to be reused solely by the same user, in the same Member State and for the same use as specifically allowed under BPR (e.g., railways sleeper reused as railway sleeper, communication pole reused as communication pole).
- To improve the enforceability and monitorability, it is suggested that a permanent labelling of creosote-treated wood with the appropriate information regarding hazards, risk mitigation measures and allowed follow-up of treated articles is discussed under the BPR if the first placing on the market is allowed.
- At the end of life, all creosote-treated wood (even if treated before December 2002) must be disposed under the Waste Framework Directive (WFD, 2008/98/EC) as hazardous waste.
- No secondary use and second-hand market of creosote-treated-wood will be allowed under the proposed restriction (not even for wood treated before December 2002). The creosote-treated wood already used in secondary application eventually needs to be disposed under the Waste Framework Directive (WFD, 2008/98/EC).

The Dossier Submitter considers the proposed restriction (RO2) to be the most appropriate EU wide measure to address the identified risk by virtue of its effectiveness, practicality (including enforceability) and monitorability.

### **3.4.1. Regulatory risk management options other than restriction**

#### **Summary of Dossier Submitter's assessment:**

The Dossier Submitter conducted an analysis of risk management options (RMOs) to identify the most appropriate measure to address the identified risks. The RMOs assessed include regulatory measures under REACH other than restriction and other existing EU legislation.

The following regulatory RMOs, other than a restriction under REACH, have been considered by the Dossier Submitter:

- SVHC identification (REACH Article 57) and listing on Annex XIV
- Labelling requirement for the treated article to provide permanent information on risk and monitoring at first placing of the market under the BPR (!)

Both of these approaches were dismissed by the Dossier Submitter as being inferior to the proposed restriction under REACH. The main argument considered by the Dossier Submitter against regulation through authorisation (Annex XIV) is that reuse and secondary use of creosote-treated articles would not be in its remit. In addition, it is emphasized that substances used in biocidal products in the scope of Directive 98/8/EC are not eligible for regulation via authorisation under REACH.

Furthermore, a labelling requirement was not considered sufficient to control the risks arising from PBT and non-threshold carcinogen substances.

#### **RAC conclusion(s):**

There are no other regulatory risk management options that would effectively address the risks referred to in the restriction proposal arising from the distribution, reuse and secondary use of creosote-treated wood.

#### **Key elements underpinning the RAC conclusion(s):**

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The BPR only covers the first placing on the market of creosote-treated wood articles. Creosote-treated wood subject to distribution, reuse or secondary use prior or after being on the second-hand market falls under the REACH Regulation specifically with regard to the risks to the general public and the environment. A restriction under REACH can be considered complementary to the risk management measures for professionals required under the BPR and would address the uneven application of the entry 31 in Annex XVII of the REACH Regulation by Member States.

With regard to the loophole of the distribution (the further supply) of newly treated wood in the EU after the first placing on the market, see section 1 and the provided explanatory notes.

### **SEAC conclusion(s):**

SEAC considers that, among all the risk management options assessed, a restriction represents the most appropriate regulatory risk management option as it is expected to be effective to address the identified risks. Authorisation is not a feasible option, and a labelling requirement alone will have a limited impact. SEAC also considers that the proposed restriction will result in increased clarity by simplifying the current entry 31 in Annex XVII of the REACH Regulation and will guarantee the alignment with the new BPR provisions.

### **Key elements underpinning the SEAC conclusion(s):**

SEAC concurs with the Dossier Submitter that authorisation is not a suitable risk management option. In fact, as specified in article 56(4b) of REACH, authorisation shall not apply to substances used in biocidal products.

SEAC considers that labelling requirements and obligations under the BPR for storage and marketing of creosote-treated wood can be a useful tool but not sufficient to control the risks arising from PBT and non-threshold carcinogen substances. Furthermore, SEAC has doubts whether labelling of the treated wood will substantially affect behaviour related to secondary use and questions whether the labels will still be present after 20 or more years of service.

SEAC notes that a few pieces of other legislation are also discussed in the Annex XV report. These include the Biocidal Products Regulation No (EC) 528/2012 (BPR) and the Waste Framework Directive No 2008/98/EC (WFD). However, the BPR regulates the first placing on the market only of creosote-treated wood and does not regulate the subsequent placing on the market. Currently, only the uses for railway sleepers and utility poles are approved. The Waste Framework Directive defines the appropriate management of the treated articles at the end of life. SEAC concurs with the Dossier Submitter that according to the definitions in the Waste Framework Directive, reuse may take place before products reach the waste stage indicating that the WFD is not the proper tool for managing reuse.

SEAC considers that there are other additional reasons for considering that a restriction is the most appropriate EU-wide measure. The first reason is the existence of a previous restriction, i.e., entry 31, which would need to be aligned with the new BPR provisions and that requires to be simplified to avoid misinterpretations of the legal text. Secondly, the French national regulatory provision, which aimed at restricting the use and the placing on the market of certain wood treated with creosote and other creosote-related substances, had to be notified under the safeguard clause Article 129 of REACH. This clause obliges the Member State that took a provisional measure on justifiable grounds when urgent action is essential to protect human health or the environment to initiate an EU restriction procedure by submitting a dossier to the European Agency of chemical products (ECHA), in accordance with Annex XV of REACH.

### **3.4.2. Effectiveness in reducing the identified risk(s)**

#### **Summary of Dossier Submitter's assessment:**

The Dossier Submitter proposes two restriction options (RO1 and RO2).

RO1 restricts all reuse and secondary use of creosote-treated wood permitted under the BPR and already placed on the market.

RO2 introduces a derogation as follows: the reuse should occur under similar conditions as specified under the BPR for the same use in the same Member State and by the same original user and would ban all secondary uses. The Dossier Submitter considers RO2 as being appropriate to address the identified risks (although not being able to quantitatively quantify the benefits), mainly aiming at protecting the general public. Professional users are already subject to/aware of the risk management measures defined under the BPR for use of creosote-treated wood.

#### **RAC conclusion(s):**

- RAC agrees to address the creosote-related substances containing constituents being carcinogenic or fulfilling PBT and/or vPvB-criteria.
- RAC concludes that the proposed restriction is targeted to the exposures causing the identified human health and environmental risks.
- RAC concludes that the risk management measures and operational conditions associated with the derogation (RO2 and the SEAC's new RO3) are appropriate and effective for the original user (and other professional users if applicable) as all reuse or secondary use will be banned for the general public.
- RAC notes that the human health or environmental risks resulting from the first placing on the market of creosote-treated wood are addressed under the BPR.
- RAC considers that, if reuse by other professional users will be allowed, a permanent labelling should be introduced (e.g., in the form of durable engraved steel plates).
- For a more effective enforcement, a requirement to keep the documents on the creosote-treated articles until their end of life could be placed on the users as part of the restriction proposal.
- RAC concludes that a transition period of 12 months is appropriate for the restriction proposal.

#### **Key elements underpinning the RAC conclusion(s):**

The proposed restriction aims to amend the current entry 31 under REACH, being not aligned with the renewal of the approval of creosote as an active biocidal substance under the BPR.

RO1 restricts all reuse and secondary use of creosote-treated wood authorised under BPR and already placed on the market.

RO2 introduces a derogation as follows: the reuse should occur under similar conditions as specified under the BPR for the same use (as primary use), in the same Member State and by the same original user and would ban all secondary uses. The BPR already regulates the biocidal use of creosote and the placing on the market of the treated wood and requires labelling of new creosote-treated wood when made available on the market for the first time, including risk management and waste treatment instructions. The original users are assumed to be aware of the BPR conditions which would make it easier to apply the RMMs and OCs regarding the specific labelling as well as the waste handling requirements.

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RAC notes that the Dossier Submitter argues that such derogated reuse under controlled conditions will allow to limit or avoid the amount of newly treated wood on the market. According to the Dossier Submitter, the derogation should be effective as long as the reuse is limited to the original user in the same Member State, as the user is the same professional aware of, and following, the conditions defined under the BPR for newly creosote-treated wood<sup>17</sup>.

RAC takes also note of the additional restrictions option (RO3, RO4 and RO5) evaluated by SEAC. These options consider the potential reuse of wood treated with creosote by other professional users than the first user, either for the same use under the same conditions as defined in the BPR (RO3) or also for any secondary use (RO5). RO4 accounts for potential

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<sup>17</sup> The renewing of the approval of creosote as an active substance for use in biocidal products ([EUR-Lex - 32022R1950 - EN - EUR-Lex \(europa.eu\)](#)) states in preamble point 14 that “...*Risk mitigation measures should be implemented to limit the exposure to creosote as far as possible, for example the recourse to mechanical or automated processes to avoid manual handling of treated wood, and the wearing of personal protective equipment by workers, and ensuring that treated wood is not accessible to the general public during storage. ... risk mitigation measures should be implemented to limit the exposure of the environment to creosote as far as possible, for example providing that industrial application is to be conducted within a contained area or on impermeable hard standing with bunding; that freshly treated timber is to be stored after treatment under shelter or on impermeable hard standing, or both, to prevent direct losses to soil, sewer or water; and that any losses from the application of the product are to be collected for reuse or disposal.*” and in point 20 that “...*the person responsible for the placing on the market of wood treated with creosote should ensure that the label of that treated wood includes specific statements aiming to protect human health and the environment,....*”

The Biocidal committee opinion (Opinion on the application for renewal of the approval of the active substance: Creosote <https://echa.europa.eu/documents/10162/fc41edcf-3732-2ba9-6a14-0fb9b423fd6c>) further specify the risk management measures workers need to consider:

- Stringent adherence to the protective measures that are already in place.
- The PPE should be changed frequently, and immediately after contamination.
- The personal hygiene shall be strict and washing with suitable cleaning solutions shall be performed as soon as possible after each work task where there is a risk of exposure.
- Risk of exposure means direct skin contact or inhalation of the vapours. However, risks vary depending on the construction of the plant and during non-routine activities. Risks can, for example, occur when opening and maintaining of the vessel or entry into treating or preservative storage vessels. In these cases, additional protection can be advised.
- Respiratory protection, such as a full face mask with particle filter P2 or preferably P3 in combination with gas filter A (brown) should be worn at critical work tasks when there is a risk of inhalation exposure.
- Chemical resistant (coated) coveralls, or equivalent, should be worn over the regular work clothes at critical work tasks when there is a risk of exposure, and a thinner pair of (cotton) gloves should be worn under the chemical resistant gloves.
- Sky lifts (aerial access platforms) shall be used if feasible/whenever possible.
- Whenever possible, mechanical or automated processes should be used to avoid manual handling of treated timber (including down-stream work, for example during work with poles in service).
- Creosote-resistant boots should be worn when entering the vessel (e.g. for cleaning or maintenance).
- In order to ensure efficient protection, tight sealings (sleeve capes) may be used at the border of different garments, e.g., at the border of gloves and sleeves and at the border of trousers and boots.
- Where there is a potential contact with creosote or creosoted wood, long sleeves shirts and long pants must be worn.
- All activities with treated timber must be undertaken at industrial sites where application processes must be carried out within a contained area; situated on impermeable hard standing, with bunding to prevent run-off and a recovery system in place (e.g. sump), and that freshly treated timber shall be stored after treatment under shelter or on impermeable hard standing, or both, to prevent direct losses to soil, sewer or water, and that any losses of the product shall be collected for reuse or disposal.
- All treatment of timber must be undertaken within the industrial impregnation facilities on an impermeable surface or in case of brushing the wood components modified after standard vacuum pressure treatment at a construction site outdoors where soil is protected with a plastic foil or tray.
- Any spill or contaminated material must be collected and disposed as hazardous waste.
- It is agreed by the BPC members that additional risk mitigation measures are required; these are to prevent leakage into ground and to minimise contact of the general public with creosote-treated material.
- In case of storage of creosote-treated timber (temporarily) at other sites than impregnation facilities (e.g. the readiness stocks of transmission poles at the site of installation), the timber should be stored on an impermeable hard standing or on an absorptive material (e.g. bark) as well as under shelter (e.g. roof or covered with a tarpaulin), and if stored in residential or recreational areas an access by general public should be restricted (e.g. using a fence or a cover).

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secondary use only by the original user.

RO3 (see below), assessed by SEAC, addresses the human health and environmental risks by banning secondary uses but allowing reuse by both the original user and other professional users in the same Member State and under the same conditions as defined by the BPR for workers and the environment. It is to be noted that if banned, reuse of treated wood by other professional users could be substituted by use of newly creosote-treated wood articles.

RAC notes that e.g., some railway companies, previously depending on buying affordable, old creosote-treated wood for reuse, may now buy new creosote-treated wood. Choosing new creosote-treated wood is possible according to the BPR if the Member State is accepting the placing on the market; this could potentially increase environmental releases as newly treated wood is expected to release more creosote than old, treated wood, thus increasing the risk to the environment and possibly to humans via the environment for PAHs. There is, however, no risk for workers expected as the BPR requires certain risk mitigation measures, and the Biocidal Committee opinion further specifies the risk management measures that workers need to consider (see footnote 16). Professional users are also expected to understand and/or have access to information on the risks and what measures to take to protect themselves.

A general advantage of restricting reuse to the same user in the same Member State is that trade with old creosote-treated wood between Member States is stopped, and thus resulting in an increased control. An increased control will reduce the possibilities for any user to purchase old creosote-treated wood (for instance via the internet), which reduces risks to the general population (mainly through diminished exposure to carcinogenic PAHs).

As regards risk, it is a matter of weighing the carcinogenic risk to the general public and the environment caused by the wider dispersive second-hand use of old treated wood, i.e., having less control versus the known risk to the environment and man via the environment through the use of more newly creosote-treated wood. In the view of RAC, an increased control of old creosote-treated wood and reduced cancer-risk is assessed as more important than any increase in controlled use. The reason being the high carcinogenic potency of PAHs and that only a very small daily exposure is needed to cause an unacceptable cancer risk.

Of the two proposals prepared by the Dossier Submitter, RAC supports the DS-proposal (RO2) to only allow reuse:

- by the original user in
- the same Member State and for
- the same use as specifically allowed under the BPR.

RAC notes that SEAC considers another option (RO3) (see section 3.4.3.1), to be the most proportionate restriction option that maximises the health and environmental benefits while minimising the costs. SEAC notes that a derogation conditional on proper buyer verification (transfer of treated article to professional users only, not to general public), placing on the market only within the same Member State and the use of adequate risk mitigation measures, could achieve similar health benefits as the ban of reuse by other professional users, while simultaneously increasing environmental benefits relative to RO2 if the alternative is the use of newly treated wood. This is because there would be lower release into the environment in the case of reuse compared to the alternative use of new creosote treatment.

RAC supports RO3 as professional users are expected to be aware of the required risk management measures. Additionally, reuse of articles is in line with the waste hierarchy and beneficial to the environment.

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RAC considers that a permanent labelling requirement (e.g., in the form of durable engraved steel plates) on each old creosote-treated wooden object would increase available information and enhance controls on old creosote-treated wood.

The users are assumed to keep the necessary documentation proving to enforcement authorities that they did not sell treated wood to the general public, i.e., non-professional users, but only to other professional companies in the same Member State. Enforcement could most likely be achieved through documentation checks on acquisition, sales and disposal of treated articles by users and audits via surveillance programs by national enforcement authorities and existing reporting systems.

RAC is not aware of requirements to keep the required documentation for the duration of the life cycle of the treated wood articles (for 20 years or more); therefore, the expected lack of documentation due to the long timeframe of the activities could further complicate enforcement in practice. For more effective enforcement a requirement to keep the required documents on the creosote-treated articles until their end of life could be placed on the users as part of the restriction proposal. This would also ensure that professional users receive relevant information on human health and environmental risks as well as conditions and risk mitigation measures. The BPR addresses the risk to human health and the environment for the original users. The associated risks are assessed under the BPR for humans and the environment for BPR-allowed uses (as railway sleeper and utility pole) in the EU for the service life (of 20 years) of the treated article.

The proposed restriction does not address any additional uses or processes that need to be applied other than already regulated under the BPR for the original users. Alternatives are to some extent available and in use and, where not, newly creosote-treated wood is still available. Therefore, the transition period of 12 months proposed in this restriction proposal is assumed sufficient and need not to be longer as the restriction proposal aims to modify the current entry 31 in REACH Annex XVII.

### **3.4.3. Socioeconomic analysis**

In the absence of the proposed restriction, SEAC considers as baseline that reuse by the original user and other professional users as well as secondary uses by the original user, by professional users and by the general public exist in the EU. Some of these uses are formally prohibited by the current entry 31 of Annex XVII to REACH but still seem to take place. This was an important reason for the proposal of a restriction.

SEAC considers that the most likely reaction of professional users in case of a ban of reuse of creosote-treated wood will be, at least in the short term, the use of the cheapest alternative, i.e., timber freshly treated with creosote both for railway sleepers and utility poles. In contrast to reuse, the use of new creosote-treated wood is not an alternative for secondary uses according to the BPR. SEAC conclusions on costs and benefits of the proposed restriction are based on these assumptions.

#### **3.4.3.1. Assessment of the costs and benefits of different provisions of various restriction options**

For the purpose of analysing costs and benefits, SEAC considered the different components (i.e., building blocks) making up the Dossier Submitter's proposed ROs. These building blocks are:

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- a) Reuse by the original user,
- b) Reuse by other professional users,
- c) Secondary use by the original user,
- d) Secondary use by other professional users,
- e) Secondary use by the general public.

As per the definition of reuse, reuses can only involve the same type of use as the original use (e.g., a railway sleeper is reused as railway sleeper and utility poles as utility poles). It is thus useful to note that reuse can only concern the original user or other similar companies (i.e., other professional users) that may use second-hand articles in the same context. Reuse by the general public is not considered feasible with this definition of reuse.

For clarity in presenting the analysis, in addition to the two restriction options assessed by the Dossier Submitter (RO1 and RO2), three additional notional restriction options (RO3, RO4, and RO5) with different combinations of these components are presented. This is to make sure that the assessment is as complete as possible.

All options ban the secondary use by the general public as this is one of the described main aims and benefits of the restriction proposed by the Dossier Submitter. Therefore, the options differ only with respect to what is restricted or allowed for the original user and other professional users in terms of reuse and secondary use of creosote-treated sleepers and utility poles.

The restriction options based on the building blocks are described as follows:

- RO1 (as defined by the Dossier Submitter): **Ban of all reuses and secondary uses** of creosote-treated wood;
- RO2 (as defined by the Dossier Submitter): **Ban of all secondary uses** of creosote-treated wood and **limitation of reuses to the original user**, in the **same Member State** and under **the same conditions**;
- RO3 (additionally considered by SEAC): **Ban of all secondary uses** of creosote-treated wood but **allowing reuses by both the original user and other professional users**, in the **same Member State** and under **the same conditions**;
- RO4 (additionally considered by SEAC): **Ban of secondary uses and reuses** of creosote-treated wood **by users other than the original user**, while **allowing secondary uses and reuses** of creosote-treated wood **by the original user** in the **same Member State**;
- RO5 (additionally considered by SEAC): **Ban of secondary uses** of creosote-treated wood **by the general public**. **Both the original user and other professional users are allowed to implement secondary uses and reuses** in the **same Member State**.

The following figure summarises the main differences between the restriction options in a



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simplified way.

**Figure 5: Overview of all restriction options considered by SEAC.**

Restriction Options		RO1	RO2	RO3	RO4	RO5
Reuse	by original user	X	✓	✓	✓	✓
	by other professional user	X	X	✓	X	✓
Secondary use	by original user	X	X	X	✓	✓
	by other professional user	X	X	X	X	✓
	by general public	X	X	X	X	X

As described by the Dossier Submitter for RO1 and RO2, also in the other three options:

- all reuses and secondary uses of treated wood are limited to the same Member State in which the first placing on the market occurred in line with BPR provisions, which in turn is subject to national approval;
- for reuse (only), same conditions are required as defined in the context of the BPR.

SEAC considers that the three additional options would deserve an in-depth assessment as they address attributes of the current regulatory situation and the recommendation to restrict these elements should be based on the consideration of relevant benefits and costs. SEAC finds that the consideration of the additional options can help to better compare all potential restriction options and to create an “à la carte” restriction that would minimise as far as possible the costs incurred by the EU society while maximising the benefits to the environment and to human health.

### 3.4.3.2. Costs

#### Summary of Dossier Submitter’s assessment:

The Dossier Submitter focuses the economic impact assessment on RO2, which was chosen as the preferred restriction option over RO1 mainly in light of risk-related considerations. A brief qualitative overview is provided for RO1, but not suggesting other considerable differences to RO2.

As a first step in the cost assessment for RO2, the Dossier Submitter estimated the number of railway sleepers that are reused each year by users other than the original user across the EEA and they modelled the replacement schedule in the baseline and the restriction scenario based on changes in the assumed service life of sleepers.

The cost categories incurred by private railway companies as considered by the Dossier Submitter include the following:

- Acquisition costs of railway sleepers,
- Installation costs of railway sleepers,
- Monitoring/maintenance costs of railway sleepers,
- Intervention costs of railway sleepers,
- Tamping costs of railway sleepers.

The result of the analysis describes the annualised net present value of extra costs (in million €) and the percentage change in this cost incurred by private railway companies due to the

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proposed restriction on reuse. Additional sensitivity analysis was also carried out by the Dossier Submitter.

In addition to the costs incurred by private railway companies, the Dossier Submitter analyses costs incurred by national railway companies, which are mainly represented by the following:

- Revenue losses related to the foregone sale of creosote-treated railway sleepers that could be reused by other users,
- Waste disposal costs related to creosote-treated railway sleepers.

The resulting total annualised net present value of extra costs incurred by national and private railway companies due to the proposed restriction on reuse ranges between 150,000€ and 9,000,000€. This considers a model of “smoothed replacement costs”, in which the substitution of reused sleepers is spread out over time. Differences in the cost ranges can be observed depending on which alternative is considered to be used: newly creosote-treated wood, copper hydroxide-treated wood, or composite plastic.

In terms of the cost distribution, it is considered that national railway companies incur only a marginal share of the costs (not impacting the quality or price of transport), whereas private railway companies are expected to face potentially higher cost increases. However, it is noted that considerable levels of uncertainty make it difficult to conclude on the quality or price of transport by these providers.

The non-monetary costs (e.g., functioning of structures and their sustainability) and indirect costs (e.g., for industrial facilities or costs related to GHG emissions) of the proposed restriction could not be quantified by the Dossier Submitter but have been discussed qualitatively.

The Dossier Submitter does not present a cost assessment for the other use sector of creosote-treated wood, namely the use for utility poles for electricity and telecommunications. The Dossier Submitter mentions that responses to stakeholder hearings have indicated the reuse of utility poles is likely not possible due to degradation of the wood and damage of the utility pole when removing it from its original location.

A cost assessment for the prohibition of sales of creosote-treated wood as secondary uses is not presented either.

### **SEAC conclusion(s):**

SEAC considers that the proposed restriction would potentially entail costs mainly to the private railway infrastructure managers (PRIMs), to the secondary users of railway sleepers and utility poles and, to a lower extent, to the national railway infrastructure managers (NRIMs) and to the users of the trains. The intermingling of effects of the restriction options on both the supply side (waste or second-hand creosote-treated wood) and demand side (second-hand creosote-treated wood or different alternatives in different Member States), the comparison with the current restriction in entry 31 and the effects on both human exposure and environmental releases do not help SEAC in establishing a clear baseline and thus understanding the costs of the proposed restriction.

Concerning the two restriction options proposed by the Dossier Submitter, SEAC considers that the main difference between RO1 and RO2 is that RO1 would entail higher costs for the NRIMs (which are the original users of the treated wood) that would no longer be able to reuse the railway sleepers. In contrast to this, reuse by the original users in the same Member State would still be allowed in RO2 (see overview in Figure 2 and Figure 3). For the private railway companies that are buying second-hand sleepers in the baseline, the costs are

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the same under RO1 and RO2, as in both ROs they have to substitute reused sleepers with alternatives. For secondary users, costs are generally the same under RO1 and RO2 (see Figure 5).

RO3 entails lower additional costs than RO2, as reuses by other professional users remain allowed in addition to reuses by the original user. The costs of RO4 are higher compared to RO3 because RO4 bans the reuse by other professional users. The difference that RO3 restricts secondary use by the original user but RO4 not, is not expected to make RO4 more favourable than RO3 because the costs of restricting reuse by other professionals is considered more significant than the cost of restricting secondary use by the original user. However, the costs of RO4 are expected to be lower compared to RO2. RO5 is the least strict option with lower costs than all other options.

SEAC's conclusion on the extent of costs incurred due to the restriction of the secondary uses is affected by uncertainties as limited data are available on the quantities of used railway sleepers or utility poles that are subjected to secondary uses and the alternatives that are likely to be adopted. It is clear, however, that freshly creosote-treated wood is not an alternative for secondary use because it is not allowed under the BPR for applications other than railways sleepers and utility poles.

SEAC notes that, for re-users, the choice of alternatives, and hence the acquisition costs associated with this choice, also results in some uncertainty. As stated before, SEAC expects that, due to its durability and cost-effectiveness, the use of freshly creosote-treated railway sleepers and utility poles will be the most likely adopted alternative in those Member States that still allow it under the BPR. Yet, other alternatives have been found available and promising in some respects, which means that the choice of the re-user is not entirely predictable. For example, the choice can depend on the future investment strategies and financial capacity of the managers of private railways or private electricity Distribution System Operators (PDSOs). They might decide to invest in a more expensive alternative (such as concrete) that may also last longer (although that has not been substantiated in detail in the Annex XV dossier). However, the choice further depends on the technical limitations related to the installation of alternatives that might induce re-users to use sleepers newly treated with creosote and creosote-related substances as an alternative to restricted reused wood articles. In this latter case, the investment costs are expected to be lower than for concrete (but still higher compared to the acquisition of second-hand sleepers for reuse in the baseline).

### **Key elements underpinning the SEAC conclusion(s):**

The Annex XV report indicated that the reuse and secondary use of creosote-treated wood mostly concerns railway sleepers and to a lower extent, utility poles. In the proposed restriction (RO2) only reuse of sleepers and utility poles by the original user for the same use is allowed.

In the absence of sufficient quantitative information, in the following paragraphs SEAC qualitatively discusses the restriction costs. The analysis focuses on the different components (i.e., building blocks) making up the Dossier Submitter's proposed ROs as explained in section 3.4.3.1. These findings are then used to conclude on the costs of the restriction options considered by the Dossier Submitter (RO1 and RO2). Furthermore, SEAC comments on the differences or similarities with the costs of the other three restriction options assessed by SEAC. This difference-based structure is meant to allow a clear and transparent comparison of cost associated with the different restriction options. SEAC considers that this structure could help the decision makers to better understand the impacts of each of the elements that

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are part of the proposed restriction, in order to consider a restriction that would minimise as far as possible the costs that will be borne by EU society, while maximising the benefits on the environment and to human health.

### **3.4.3.2.1. Costs of restricting the reuse by the original user (RO1 only)**

Among all five options assessed, only RO1 as proposed by the Dossier Submitter prohibits the reuse by the original user. Based on the Dossier Submitter's analysis, SEAC considers that restricting the reuse of creosote-treated wood by the original user could potentially entail the following cost changes:

- For original users:
  - **Acquisition costs increase** compared to the baseline
  - **Disposal costs increase** compared to the baseline
- For consumers:
  - **Costs of transportation and utility network use are expected to be unchanged** compared to the baseline

Additional considerations and explanations are presented below.

#### ***3.4.3.2.1.1. Costs incurred by original users in case of restricting the reuse by the original user (RO1 only)***

The first part of the section focuses on the costs for NRIMs associated with restricting their own reuse of railway sleepers. The second part below discusses similar costs associated with the impossibility for national electricity Distribution System Operators (NDSOs) to reuse their own utility poles (if this reuse is existing in the EEA).

In case the reuse by the original user of creosote-treated sleepers would be banned for NRIMs under the most restrictive option (RO1), as other alternatives on the market are currently more expensive and as reuse avoids premature disposal of articles, there will be the following impacts:

- significant additional costs of substitution (including installation costs) from not being able to reuse in-house and, subsequently, for having to buy and to install new sleepers instead;
- additional costs associated with the adequate disposal of all used wooden railway sleepers treated with creosote that could have been reused by NRIMs.

SEAC notes that, for the EU NRIMs, the size of these costs strictly depends on:

- the current baseline, i.e., whether and to which extent (volumes of sleepers) they currently reuse their own old sleepers themselves or use them for other purposes (secondary use) or sell/donate their dismantled sleepers to be reused by private railways or to be used for secondary application by other parties (incl. the general public);
- the choice of alternatives and the price difference between the used creosote-treated sleepers and the alternative;
- the choice of the restriction option.

SEAC notes that, during the third-party consultation on the Annex XV report, the French and the German national railways network managers provided comments illustrate quite well the diversity of the baseline situations for the NRIMs across Europe, hence the different potential

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size of impacts.

SNCF RESEAU, the French national rail network manager (comment #3797), indicated that, for environmental reasons related to the possibility of extending the service life of wood and for energy saving, they are in favour of reuse of sleepers by the same user, (as well as, more in general, of the reuse by any actor). SEAC notes that SNCF provided the annual number of wooden sleepers treated with creosote that are deposited, reusable, reused and incinerated in France, as well as some information on the price of the sleepers (€40/sleeper). However, it was difficult to make an extrapolation for the EU.

The Deutsche Bahn (DB Netz AG), the German national railway network manager, commented (comment #3819) that they do not reuse creosote-treated wooden sleepers and that they are directly disposed of by incineration with energy recovery. As such, for them, the proposed restriction has no influence on their current situation, and hence, the restriction would not have any socio-economic impact on them. Moreover, DB Netz AG underlined that they do not impregnate and do not import creosote-treated sleepers. The German Competent Authority also added (comment #3948) that in Germany an evaluation of economic efficiency was carried out for plastic sleepers, in comparison to impregnated wooden sleepers. Considering the whole lifecycle costs for plastic sleepers (cost for the materials, installation and maintenance costs, etc.), this assessment showed positive results. Therefore, the German Competent Authority concludes that a substitution of creosote-treated wooden sleepers with plastic sleepers within the German national railway infrastructure run by the DB Netz AG seems to be economically feasible. However, the German Competent Authority also added that the situation for private/touristic railway networks in Germany might be different and that no information is available on the expected socio-economic impacts on these private/touristic railway companies. In the reaction to the SEAC draft opinion the German Competent Authority (comment #1240) provided information on where creosote sleepers are still applied. This information has been captured in section 3.3.1. Amounts were not provided.

Based on the available information, sleepers newly treated with creosote (still allowed under BPR) are currently expected to be cheaper than other types of alternative sleepers. SEAC considers that, in the coming years, EU NRIMs are still likely to use these new wooden creosote-treated sleepers as an alternative to reuse of existing sleepers, if the Member State is included in the Lists of Member States where wood treated with creosote may be placed on the market for certain uses in accordance with Commission Implementing Regulation (EU) 2022/1950<sup>18</sup>.

One user of creosote-treated wood reacted to the SEAC draft opinion (comment #1241) and indicated that the reuse of the used wooden sleepers by the original user would contribute to the better economic management of the maintenance of the railway line as it would significantly reduce its costs, given the amount of maintenance needed in the network. The creosote-treated sleepers are only reused if they are in good condition and in no case is their use a routine practice. The economic consequence of not using them will be at least proportional to the relevant stocks. They also indicated that it would be difficult to completely replace the wooden sleepers since creosote-treated sleepers occupy long stretches and since there are significant stocks. SEAC has interpreted that as stating that prohibition of reuse would have considerable cost implications. As reuse is linked to the registration of use within a Member State under the BPR, this may also affect use of second-hand material.

This second part refers to the costs for NDSOs associated to the impossibility to reuse their

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<sup>18</sup> Source: [Microsoft Word - Creosote-PT8\\_DraftlistofMSfortreatedwood.docx \(europa.eu\)](#)

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own utility poles (if this reuse is existing in the EEA).

Concerning the reuse of utility poles, SEAC notes that these uses were not assessed by the Dossier Submitter, as the stakeholder consultation carried out for the preparation of the Annex XV report indicated that reuse of utility poles is not likely to be possible due to degradation of the wood and damage of the utility pole when removing it from its original location.

However, SEAC notes that, in the third-party consultation on the Annex XV report, information was submitted by the Northern Ireland Electricity Network (NIE) indicating reuse (and secondary use) of utility poles in Northern Ireland (comment #5167. NIE indicated that creosote-treated utility poles that are removed from their network are reinstalled (reused) on their own network but in other locations. Even if the current amount of in-house reuse is low, they anticipate an increase in the levels of in-house utility pole reuse as they are undertaking a major overhead line network rebuild.

During the third-party consultation on the SEAC draft opinion (comment #1244), NIE commented that, at present, the alternative to reusing a pole would simply be to dispose of it and to purchase a new creosote-treated wood pole, entailing a much higher environmental and financial cost with no apparent benefits.

SEAC notes that, in their second comment, NIE made clear that in accordance with Protocol on Ireland/Northern Ireland of the Agreement on the withdrawal of the UK from the EU, the provisions of REACH, BPR and WFD continue to apply in Northern Ireland. NIE underlined that the proposed restriction has the potential to impact NIE Networks significantly.

SEAC considers that both comments received from NIE provide indication of the possible reuse (and secondary use) of utility poles that could also occur in European Member States. SEAC notes that, during the third-party consultation, no other comments were received on the use, the reuse (and the secondary use) of electricity nor on other types of utility poles.

If the situation of NDOs in the EU Member States is similar to the case of the NIE, the ban of reuse by the original user (in RO1) would result in the following economic impacts for National DSOs in the EU:

- additional acquisition costs of new utility poles when not being able to reuse in-house the removed poles. Considering the fact that removed poles might not be in good condition, the fact that currently underground wiring is largely used instead of utility poles and taking into account that there were no reactions at all from EU NDSOs during the consultations (those carried out by the Dossier Submitter as well as during the third-party consultation on the Annex XV report), SEAC expects that the total volumes of removed utility poles that are reused (or used for secondary applications) in the EEA should be quite limited. Hence, the total economic impacts for the EU NDSOs are not expected to be significant.
- additional costs associated with the immediate and adequate disposal of all used wood utility poles treated with creosote that could have been reused by NDSOs.

In case the reuse by the original user in the same Member State is banned (RO1), as the prices of all other alternative types of utility poles on the market are currently higher, SEAC considers that there might be some costs of substitution to the national distribution system operators (electricity and telecommunication). Since RO2, RO3, RO4 and RO5 do not ban the reuse by the original user in the same Member State, SEAC notes that, in these restriction options, there are no additional costs for the original distributor that would be related to the reuse of its own articles.

**3.4.3.2.1.2. Costs incurred by other professional users in case of restricting the reuse by the original user (RO1 only)**

It is not expected that other professional users (PRIMs and PDSOs) will be directly affected when the reuse of railway sleepers and utility poles by NRIMs and NDSOs is restricted. This is because those railway sleepers and utility poles that are reused by the original user in the baseline are not considered to be available for sale to other professional users. It depends on whether reuse by those other professional users would still be allowed. For simplicity, the restriction impacts related to uses by other professional users will be considered separately in the next section of this opinion.

**3.4.3.2.1.3. Costs incurred by consumers (users of trains and utility networks) in case of restricting the reuse by the original user (RO1 only)**

No major impacts on users of trains and utility networks are expected to be likely. Generally, an effect on consumers is considered more likely if reuse by other professional users is restricted, and thus the detailed analysis of the costs for consumer will be discussed in the next section. This analysis will comment on users of both national and private providers.

**3.4.3.2.2. Costs of restricting the reuse by other professional users that are not the original user (RO1, RO2 and RO4)**

Three of the five assessed options (RO1, RO2 and RO4) prohibit the reuse by professional users other than the original user. SEAC considers that restricting the reuse of creosote-treated wood by other professional users could potentially entail the following cost changes:

- For original users:
  - **Revenue losses** compared to the baseline;
  - **Disposal costs increase** compared to the baseline.
- For other professional users:
  - **Acquisition costs increase** compared to the baseline;
  - **Disposal costs decrease** compared to the baseline.
- For consumers:
  - **Costs of transportation and utility network use are expected to be unchanged** compared to the baseline.

Additional considerations and explanations are presented below.

**3.4.3.2.2.1. Costs incurred by original users in case of restricting the reuse by other professional users (RO1, RO2 and RO4)**

This first part of the section focuses on the costs for the NRIMs associated with restricting the reuse of railway sleepers by PRIMs while the second part below discusses similar costs associated with the restriction of the reuse of utility poles by PDSOs if this reuse is existing in the EU.

SEAC considers that, for NRIMs, a restriction banning the reuse by private railway companies would result in the following economic impacts:

- revenue losses from the foregone sales of creosote-treated sleepers that would be reused by other actors in the baseline. However, SEAC notes that dismantled sleepers are generally sold at a very low price and, in some cases, they are even given away for free. Hence the revenue loss is not expected to be significant;

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- additional costs associated with the adequate disposal of all creosote-treated sleepers (including transportation cost) that, in the baseline, would have been sold for reuse by private railway companies.

SEAC's conclusions on the size of the reduced revenues and additional disposal costs for the NRIMs are affected by uncertainties as information on the number of sleepers reused (or used for secondary applications), on the service life, on the disposal costs and on the choice of the alternatives is lacking in the Background Document and it was also not provided during the consultation on the Annex XV dossier.

SEAC considers that by allowing reuses both by the original user and by other professional re-users (private railways), RO3 and RO5 will entail minor revenue losses and additional disposal costs for the NRIMs (only resulting, for RO3, from the impossibility to sell articles for secondary applications by other professional users and, for RO3 and RO5, to the general public). Comparatively, larger revenue losses are to be expected from RO1, RO2 and RO4 where reuse by other professionals is prohibited (RO2 and RO4) or where reuse is completely prohibited (RO1) (see Figure 5 and Table 6).

This second part focuses on the costs for the NDSOs in case of restriction of reuse of utility poles by PDSOs.

From the third-party consultation on the Annex XV report, no information was gathered on reuse of second-hand utility poles by private distribution system operators (not even in the comment referred to in the previous subsection). Therefore, it is not clear if there will be impacts on national DSOs in the EU when the reused by other professional users in banned (only if they are selling used utility poles to other professional re-users in the baseline). However, SEAC notes that reuse by these private operators cannot be fully excluded.

If reuse by private DSOs (other professional users) exists in the EU, similar impacts on national DSOs (original users) as described above for NRIMs and railway sleepers can be expected:

- revenue losses;
- increased disposal costs.

SEAC considers that, if reuse by other private electricity distributors exists in the baseline, only one of the two involved actors needs to dispose the material (either the original user or the re-user). In contrast, if reuse by other professional users is restricted, the re-user may become an original user of freshly creosote-treated utility poles (where still allowed under the BPR) and then both parties need to take care of the disposal of their own creosote-treated material. As highlighted by an NDSO that submitted information during the consultation on the Annex XV report, SEAC notes that in case hazardous waste disposal facilities are not in the proximity of the location of removal, disposal costs could potentially be significant if poles will have to be transported far away for incineration as hazardous waste.

SEAC further notes that, if reuse by a different operator than the original user exists in some Member States, SEAC does not expect that volumes of creosote-treated second-hand utility poles that are reused would be significant. Therefore, in the specific context of utility poles, SEAC doesn't expect significant economic impacts for RO2 nor for the other restriction options that restrict the reuse by a different user (i.e., RO1 and RO4). SEAC considers that by allowing the reuses of utility poles by other re-users (private DSOs), RO3 will maintain the situation as it is in the baseline without any significant change in the current situation.



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**3.4.3.2.2.2. Costs incurred by other professional users in case of restricting the reuse by other professional users (RO1, RO2 and RO4)**

This first part of the section focuses on the costs incurred by PRIMs due to restricting their possibility to reuse railway sleepers while the second part below discusses similar costs associated with the restriction of the reuse of utility poles by PDSOs.

In case the reuse of creosote-treated sleepers by other professional users would be banned, for private RIMs (other professional users), there will be the following impacts:

- additional costs of substitution due to not being able to reuse sleepers from NRIMs and having to buy and install new sleepers instead;
- decreased disposal costs if a more durable alternative is chosen.

SEAC notes that the size of these costs depends on:

- the current baseline, i.e., whether and to which extent (volumes of sleepers) they currently reuse old sleepers;
- the choice of alternative and the price difference between the used creosote-treated sleepers and the alternative;
- the choice of the restriction option.

In restriction options in which the reuse by another actor than the original user is banned (such as RO2 as proposed by the Dossier Submitter but also in RO1 and RO4), the main costs for the private railway managers will be (higher) substitution costs for the acquisition of alternative sleepers, deriving from the impossibility to buy second-hand creosote-treated sleepers. Assuming that the private railway managers are rational actors, SEAC considers that costs will increase as the prices of all other types of sleepers on the market are likely higher. SEAC notes only the price difference should be taken into account to assess the costs of these restriction options. SEAC cannot provide an estimation for the socio-economic impacts on the private railways as the required information on costs per sleepers and on the total number of sleepers reused by private railways in the EU is not available neither in the Annex XV report nor from submissions to the consultation on the Annex XV report.

In the third-party consultation on the Annex XV report (comment #3753), the French National Union of touristic railways (UNECTO) indicated that creosote-treated wood for railway sleepers from the national railway can be reused on all tracks of the railway network including all types of secondary lines of touristic railway networks. UNECTO commented that being able to reuse wood sleepers from the national railway allows touristic railway networks to maintain at a reasonable cost the secondary lines often operated by small entities managed by volunteers. SEAC notes that UNECTO provided some information on the costs for reusing wood sleepers (€3-5 for transport) and the costs for buying new sleepers (up to €30-35/sleeper for approximately 20 000 sleepers per year in France). However, it was difficult to make an extrapolation for the EU.

As quoted above, the German Competent Authority (comment #3948), mentioned that in Germany information concerning the economic feasibility of substitution to plastic sleepers for private/touristic railway networks over the whole lifecycle, in terms of costs for the materials, installation and maintenance, etc., is missing while, from the assessment carried out in Germany, the substitution to plastic sleepers seems to be economically feasible for the German NRIM (original users). SEAC agrees with the DE Competent Authority that in Germany and elsewhere in the EU the economic situation for the private railway (re-users of second-hand articles) managers might be different from that of the NRIMs.

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Based on the available information, sleepers newly treated with creosote (still allowed under BPR) are currently cheaper than other types of alternative sleepers. SEAC considers that, in the coming years, both EU NRIMs as well private railways are likely to use these new wooden creosote-treated sleepers as an alternative to reuse of existing sleepers, if the Member State is included in the Lists of Member States where wood treated with creosote may be placed on the market for certain uses in accordance with Commission Implementing Regulation (EU) 2022/1950<sup>19</sup>.

SEAC notes that, at least initially, if other types of railway sleepers are used instead (rather than reused creosote-treated sleepers or freshly creosote-treated sleepers), the increase of costs will likely be significant compared to the baseline scenario. However, SEAC notes that the prices of these other types of sleepers (hence the costs of substitution) will likely decrease over time, potentially becoming more affordable in the future.

However, alternative sleepers not treated with creosote would also need to reach comparable durability (in addition to lower price) in order to be more competitive with freshly creosote-treated sleepers. SEAC notes that, by investing in durable new sleepers, the private railways will reduce and postpone the frequency and number of sleepers to be disposed of (and the associated costs). Currently, a longer service life (with the smallest price increase) may be expected for sleepers newly treated with creosote and creosote-related substances. In the long run, this will become a benefit for private railway managers as they would be able to use the sleepers for more years. In fact, they would save the money necessary to buy more frequently reused sleepers that are indeed cheaper, but that would not last as long and would imply several rounds of disposals. However, SEAC assumes that the sleepers freshly treated with creosote are disposed of in a similar way as in the case of reused sleepers and thus have a similar cost per disposed sleeper. Hence, the long-term disposal cost decrease (compared to the baseline) is mainly a discounting effect.

As source of uncertainty, SEAC further notes that the situations of private/touristic railway companies might be very different in different Member States as there could be private companies that currently do not use at all second-hand creosote-treated sleepers (and already use new sleepers of different types) or use a very limited or a very high number of creosote-treated second-hand sleepers. Therefore, depending on their current situation, SEAC notes that the proposed restriction by the Dossier Submitter (RO2) could potentially entail no economic impacts at all, limited or very high costs to the private railway managers. SEAC notes that only one comment was received from private railways (UNECTO from France) during the consultation on the Annex XV report, which does not enable SEAC to better understand the diversity of the existing situation within the EU.

In restriction options RO3 and RO5 that allow the reuses of sleepers both by the original user and by the private railway managers, SEAC notes that the private railway managers (as well as the NRIMs) will not be impacted compared to the baseline as there will be no changes in the current acquisition price of the dismantled sleepers nor on disposal costs that will remain the responsibility of the private railways after the end of the sleepers' service life.

In the third-party consultation on the SEAC draft opinion (comment #1242), the Directorate for Cultural Heritage of Norway commented that some of the wooden creosote-treated sleepers removed by the Norwegian NRIM (that is switching to concrete) are currently reused on all nine historic railways as well as by museums in Norway. It was underlined that Norwegian museums reuse railway sleepers made of wood because wood has a cultural-

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<sup>19</sup> Source: [Microsoft Word - Creosote-PT8\\_DraftlistofMSfortreatedwood.docx \(europa.eu\)](#)

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historical significance in Norway but also for financial reasons. SEAC notes that this reuse is still allowed under restriction option 3 (RO3). This second part focuses on the costs incurred by PDSOs associated with restricting their possibility to reuse utility poles.

SEAC notes that even if electricity distribution networks in the EU are majority-owned by the public sector, privately-owned distribution utilities also exist.

From the third-party consultation on the Annex XV report, limited information was gathered on reuse of second-hand utility poles by private distribution system operators. However, SEAC notes that reuse by these operators cannot be fully excluded.

If some reuse by private DSOs exists in the EU, private electricity distributors would incur

- significant substitution costs as the alternatives would most likely be more expensive but;
- at the same time, they will reduce their disposal costs in the future (like for the private railway managers for sleepers). However, SEAC notes that, in economic terms, in the long run, by investing in new utility poles (freshly treated with creosote and creosote-related substances or other types of poles), private DSOs would be able to use the utility poles for more years hence reducing and postponing the frequency and number of poles to be disposed of (and the associated costs).

SEAC notes that, if reuse by a different actor than the original user exists at all in some Member States, SEAC does not expect that volumes of creosote-treated second-hand utility poles that are reused would be significant. Therefore, SEAC doesn't expect significant economic impacts for RO2 nor for the other restriction options that restrict the reuse of utility poles by a different user (i.e., RO1 and RO4). In the consultation on the SEAC draft opinion the NIE provided information that currently a small percentage of utility poles are reused, but that they expect an increase in the future. SEAC notes that utility poles are still allowed by the BPR to be treated with creosote, but considers that the (likely few) users of second-hand utility poles could also be affected by a restriction on reuse of wood treated with creosote. However, the available information did not allow SEAC to quantify the socio-economic cost in the EU.

SEAC considers that by allowing the reuse of utility poles both by the original user and by the current re-users (private DSOs), RO3 will maintain the situation as it is in the baseline without any change in the current acquisition price of utility poles nor on costs for the disposal of the poles that will remain the responsibility of the PDSOs after the end of the utility poles' service life.

### **3.4.3.2.2.3. Costs incurred by end users in case of restricting the reuse by other professional users (RO1, RO2 and RO4)**

This first part focuses on the impacts on travellers associated with restricting the reuse of railway sleepers by PRIMs while the second part below discusses the impacts on electricity users associated with the restriction of the reuse of utility poles by PDSOs if this reuse is existing in the EEA.

SEAC assessed the possible negative impacts on the availability, safety, quality or price of transport services for travellers on the national and the private railway lines.

SEAC does not expect any reduction in the availability of trains for the NRIMs as the costs are not significant. Unavailability of transport services is excluded also for the private/touristic railway as their managers would most likely prefer to increase the price (and avoid losing their business) instead of closing down railway lines.

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SEAC does not expect any decrease in the safety nor on the quality of the transport service neither for users travelling on the NRIMs nor for those travelling on private railways as the alternative sleepers will not be less safe nor of lower quality.

SEAC considers that, under the proposed restriction by the Dossier Submitter (RO2) as well as under the additional ROs assessed by SEAC, no or only minor price increases for users of the national railway lines can be expected as the additional costs on NRIMs will be relatively low and ticket pricing depends on many other technical and economic factors. As indicated above, for people travelling on private/touristic railway lines, SEAC cannot exclude some increase in the price of tickets. Anyway, SEAC considers that, even under the restriction options RO1, RO2 and RO4, significant cost increases are not likely, because investment costs can be recovered over time, hence with a small (but likely permanent) price increase. Moreover, SEAC also considers that a significant increase would discourage travellers from buying tickets.

It has to be noted that travellers of private railway networks that are currently reusing the sleepers from the NRIMs in their own Member State will not be impacted at all under RO3 and RO5 as the reuse by another actor than the original user in the same Member State and under the same condition will remain possible, i.e., the baseline will remain unchanged.

These SEAC considerations are summarised in the table below.

**Table 4: Potential impacts on travellers on the national or on private railway lines**

	Traveller on national railway lines	Traveller on private railway lines
Unavailability of trains	No	No
Lower safety of the transport service	No	No
Lower quality of the transport service	No	No
Increased price of the tickets	Unlikely or minor	It cannot be excluded but the increase is not expected to be significant

This second part focuses on the expected impacts on end users of energy associated with the restriction of the reuse of utility poles by PDSOs.

As for the railway networks, SEAC carried out a qualitative assessment of the possible negative impacts on the availability, safety, quality, or price of electricity distribution on the commercial and private users of national and private electricity networks.

As a consequence, SEAC considers that the availability of electricity for the final users is not likely to be affected as it depends much more on geopolitical and other legal, political and technical factors that may entail an increase or a decline of different electricity sources (gas, coal, wind, solar, hydroelectric and nuclear), which contribute the most to a modification of the electricity tariffs.

SEAC does not expect any reduction in the quality, safety nor reliability of the electricity distribution networks nor additional difficulties in putting in place new electricity grid connections that would affect the electricity users as a result of the restriction proposed by the Dossier Submitter (RO2) as the reuse by the same user in the same Member State and under the similar conditions would be allowed.

SEAC considers that no or only minor tariff increases for users of the national electricity

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network operators should be expected, as the loss of revenues and the additional disposal costs imposed on national DSOs will be relatively low and electricity pricing depends on many other technical, political and economic factors.

It has to be noted that if some reuse of utility poles exists by private distribution system operators, users of electricity distributed by private DSOs will not be impacted at all under RO3 and RO5 as the reuse by another actor than the original user will remain possible, i.e., the baseline will remain unchanged. This would not be the case under the restriction proposed by the Dossier Submitter (RO2) nor if RO1 and RO4 will be chosen as the most preferred restriction option, as the reuse by another user than the original one (in the same Member State) will not be allowed and some cost increases can be expected. In fact, in this case, SEAC cannot exclude an increase in tariffs by private distribution system operators for commercial or private end-users. However, SEAC considers that significant cost increases are not likely, because investment costs can be recovered over time. However, SEAC also notes in case of a significant tariffs increase, electricity being a primary need with a limited elasticity of the demand to prices, end users would not have another choice than to keep buying electricity.

These SEAC considerations are summarised in the table below.

**Table 5: Potential impacts on electricity users of the national or on private distribution network operators**

	User of electricity from national distribution system operators	User of electricity from private distribution system operators
Unavailability of electricity	No	No
Lower safety of electricity	No	No
Lower quality of the electricity	No	No
Increased tariff of electricity	Unlikely or minor	It cannot be excluded but the increase is not expected to be significant

### **3.4.3.2.3. Costs of restricting the secondary use by the original user (RO1, RO2 and RO3)**

Three of five assessed options (RO1, RO2 and RO3) prohibit the secondary use by the original user. SEAC considers that restricting the secondary use of creosote-treated wood by the original user could potentially entail the following cost changes:

- For original users:
  - **Acquisition costs increase** compared to the baseline;
  - **Disposal costs increase** compared to the baseline.
- For consumers:
  - **Costs of transportation and utility network use are expected to be unchanged** compared to the baseline.

Additional considerations and explanations are presented below.

**3.4.3.2.3.1. Costs incurred by original users in case of restricting the secondary use by the original user (RO1, RO2 and RO3)**

This first part of the section focuses on the costs incurred by original users of railway sleepers (NRIMs) in case their own secondary use is restricted while the second part analyses the costs incurred by original users of utility poles (NDSOs) in case of restricting their own secondary use.

Similar to section 3.4.3.2.1.1., the impacts of restricting secondary uses by original user are expected to include the following impact categories:

- An increase in acquisition costs applies in ROs where secondary use by the original user (e.g., as embankment) is banned as the users will have to purchase alternative material which is likely to be more expensive. Freshly creosote-treated wood is not an option to replace secondary uses because the use of new creosote-treated wood is only allowed for applications as railway sleepers or utility poles under the BPR;
- Additionally, there may be increases in disposal costs, as sleepers that could have been used for secondary uses must be adequately disposed as hazardous waste.

As indicated in section 3.4.3.2.1.1., during the consultation on the Annex XV report, only the French NRIM commented on the advantages of allowing the secondary use of creosote-treated sleepers by the original user (comment #3797). SNCF RESEAU explains that restricting all secondary use would impede the national railways from secondary in-house use of these sleepers on their own properties, for example in the embankments. Another comment submitter, the German NRIM, reports that no secondary uses take place in the context of their articles (comment #3819), whereas the German CA (comment #3948) indicates there seems to be some reports of counties in Germany where at present old railway sleepers are installed as slope supports, fence posts or other construction elements.

SEAC is lacking detailed information on how frequently secondary uses by the original user occur in the baseline situation in the EU. Based on the amount of related comments received in the third-party consultation on the Annex XV report, SEAC expects that the implementation of secondary uses of creosote-treated railway sleepers by the original user is not very widely spread. Both kinds of cost increases for original users may thus be considered less significant. However, there is significant uncertainty about the conclusions on secondary use by original users.

This second part focuses on the costs incurred by NDSOs in case their own secondary use is restricted.

As indicated in section 3.4.3.2.1.1., during the consultation on the Annex XV report, one of the NDSOs commented on secondary uses of utility poles by third parties (comment #5167). However, it is not mentioned whether or not the network providers themselves implement secondary uses of used creosote-treated utility poles.

If this was the case, the ban of secondary use by the original user (in RO1, RO2 and RO3) would result in the following economic impacts for National DSOs in the EU:

- additional acquisition costs for alternatives to replace the secondary use by the original user, which cannot involve freshly creosote-treated wood because it is not allowed for secondary uses under the BPR;
- additional costs associated with the adequate disposal of all used utility poles treated with creosote provided that these could have been subjected to secondary use by the NDSOs.

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It is important to note that no information was provided on whether original users implement secondary uses, not even from the stakeholder using creosote-treated utility poles (the NIE Network from Northern Ireland) that responded to the third-party consultations on the Annex XV report and on the SEAC draft opinion.

Considering that removed poles might not be in good condition and that they would likely be reused as utility poles if they were in good condition, SEAC expects that the total volume of utility poles in secondary use by the original user in the EU should be quite limited. Based on this, the total economic impacts are not expected to be significant. However, there is significant uncertainty about the conclusions on secondary use by original users.

### **3.4.3.2.3.2. Costs incurred by other professional users in case of restricting the secondary use by the original user (RO1, RO2 and RO3)**

It is not expected that other professional users will be directly affected when the secondary use by the original user is restricted. This is because those railway sleepers and utility poles that are subjected to secondary use by the original user in the baseline are not considered to be available for sale to other professional users.

### **3.4.3.2.3.3. Costs incurred by consumers (users of trains and utility networks) in case of restricting the secondary use by the original user (RO1, RO2 and RO3)**

No major impacts on users of trains and utility networks are expected to be likely due to similar reasoning as described in section 3.4.3.2.2.3.

### **3.4.3.2.4. Costs of restricting the secondary use by other professional users (RO1, RO2, RO3 and RO4)**

Four out of five assessed options (RO1, RO2, RO3 and RO4) prohibit the secondary use of creosote-treated railway sleepers by PRIMs and utility poles by PDSOs. SEAC considers that this restriction of secondary use could potentially entail the following cost changes:

- For original users:
  - **Revenue losses** compared to the baseline;
  - **Disposal costs increase** compared to the baseline;
- For other professional users:
  - **Acquisition costs increase** compared to the baseline;
  - **Disposal costs decrease** compared to the baseline;
- For consumers:
  - **Costs of transportation and utility network use are expected to be unchanged** compared to the baseline.

Additional considerations and explanations are presented below.

### **3.4.3.2.4.1. Costs incurred by original users in case of restricting the secondary use by other professional users (RO1, RO2, RO3 and RO4)**

The first part of this section describes the potential cost categories incurred by NRIMs in case secondary use of railway sleepers by PRIMs is restricted while the second part focuses on the potential costs incurred by NDSOs in case secondary use of utility poles by PDSOs is restricted.

As indicated in section 3.4.3.2.3.1., the French NRIM indicated that they used to implement secondary uses of their own sleepers before France banned the practice nationally (comment #3797). However, it was not reported whether secondary uses by other professional users

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also took place.

The German NIRM states that no secondary uses are implemented and that deinstalled articles are disposed of, but it is not fully clear if this excludes other professional users from acquiring used sleepers from the NIRM for secondary use (comment #3819). The German CA (comment #3948) indicates there seems to be some reports of counties in Germany where at present old railway sleepers are installed as slope supports, fence posts or other construction elements.

Similar to section 3.4.3.2.2.1., if secondary use by other professional user took place in the EU, the restriction of this practices would potentially result in the following impacts for original users:

- revenue losses from the foregone sales of creosote-treated sleepers that would be subjected to secondary use by other actors in the baseline. However, SEAC notes that dismantled sleepers are generally sold at a very low price and, in some cases, they are even given away for free. Hence the revenue loss is not expected to be significant;
- additional costs associated with the adequate disposal of all creosote-treated sleepers (including transportation cost) that would have been sold for secondary use by private railway companies.

SEAC's conclusions on the size of the reduced revenues and additional disposal costs for the NRMIs are affected by uncertainties as information on the number of sleepers used for secondary applications, on the service life, on the disposal costs and on the choice of the alternatives is lacking in the Background Document and it was also not provided during the consultation on the Annex XV report.

This second part focuses on the cost categories for NDSOs associated with the restriction of secondary use of utility poles by PDSOs.

One National DSO reports that secondary use of second-hand utility poles exists if requested by the owners of the land on which poles where placed. The recipients could be consumers or professionals according to the comment and the transfer represents a goodwill gesture for allowing work to be undertaken on their land. The comment highlights that secondary use is only implemented for utility poles treated before 31 December 2002. Newer utility poles must be treated as hazardous waste according to the existing restriction entry 31. If this is enforced consistently, it could be considered that secondary uses are becoming less frequent because the existing population of utility poles that have been treated before the cut-off date is decreasing the more poles reach the end of their service life.

If secondary use by private DSOs (other professional users) exists in the EU, similar impacts on national DSOs (original users) as described above for NRMIs and railway sleepers can be expected:

- revenue losses;
- increased disposal costs.

SEAC expects that the total volume of utility poles in secondary use by other professional users in the EU should be quite limited. Additionally, the price at which used articles are given away is typically low, implying that revenue losses might be rather low. Based on this, the total economic impacts are not expected to be significant. However, there is significant uncertainty about the conclusions on secondary use by other professional users.



**3.4.3.2.4.2. Costs incurred by other professional users in case of restricting the secondary use by other professional users (RO1, RO2, RO3 and RO4)**

This section describes altogether the potential cost categories for the PRIMs and the PDSOs respectively in case the secondary use of railway sleepers and utility poles by PRIMs and the PDSOs is restricted.

SEAC notes that the Annex XV dossier does not consider the costs for secondary users of sleepers and utility poles treated with creosote. SEAC acknowledges that a quantification of such costs seems very complicated, as the sales of sleepers often occur via the internet and it is not easy to know how many sleepers or utility poles are bought for each type of application (fences, docks in harbours and waterways, stakes, embankments, etc.) and at what price.

Similar to section 3.4.3.2.2.2., the restriction of secondary uses by other professional users (not the original users) would potentially result in the following impacts for the other professional users:

- additional costs of substitution due to not being able to use railway sleepers and utility poles for secondary applications and having to buy alternative material instead;
- decreased disposal costs as alternatives likely do not require disposal as hazardous waste.

SEAC assumes that the choice of using second-hand railway sleepers or utility poles for secondary applications (mainly as fences, docks, stakes and embankments) is made by farmers, breeders or other actors, based on economic considerations and on other (mainly technical). As a consequence, SEAC expects that all restriction options restricting the secondary use will increase the costs for these actors mainly in terms of costs for the acquisition of fences, stakes, embankments, etc. made of alternative materials.

It has to be noted that the current BPR approval does not allow the use of creosote in the treatment of wood for other applications than railway sleepers and utility poles. Hence, for instance, for the secondary use of creosote-treated wood as fence the alternative could not be wood freshly treated with creosote. Based on this consideration, the disposal costs are expected to decrease in the long term with a restriction because alternative materials may likely to not require disposal as hazardous waste (as it is required for creosote-treated wood).

SEAC considers that restricting the secondary use by the private railway managers (such as embankments) as in RO1, RO2, RO3 and RO4 will have no major impacts in terms of socio-economic costs as this possibility is probably very limited as the already reused sleepers might not be in a condition good enough even for subsequent secondary applications. Same is considered to apply for secondary use of utility poles.

**3.4.3.2.4.3. Costs incurred by consumers (users of trains and utility networks) in case of restricting the secondary use by other professional users (RO1, RO2, RO3 and RO4)**

No major impacts on users of trains and utility networks are expected to be likely due to similar reasoning as described in section 3.4.3.2.2.3.

**3.4.3.2.5. Costs of restricting the secondary use by the general public (all ROs)**

All assessed options prohibit the secondary use of creosote-treated railway sleepers and utility poles by the general public. The general public is considered to be most vulnerable to the risk associated with creosote and related substances because the exposed people may be unaware or unable to protect themselves. Thus, this population is considered to be most at risk and all restriction options assessed aim to ban secondary uses of creosote-treated wood by the

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general public. SEAC considers that restricting the secondary use of creosote-treated wood by the general public could potentially entail the following cost changes:

- For original users:
  - **Revenue losses** compared to the baseline
  - **Disposal costs increase** compared to the baseline
- For consumers:
  - **Costs of transportation and utility network use are expected to be unchanged** compared to the baseline
  - **For those members of the general public that make use of secondary use of creosote-treated articles, acquisition costs increase** compared to the baseline

Additional considerations and explanations are presented below.

### ***3.4.3.2.5.1. Costs incurred by original users in case of restricting the secondary use by the general public (all ROs)***

Similar as described in section 3.4.3.2.4.1., under a restriction of secondary use by the general public, the original users of railway sleepers and utility poles may be expected to incur:

- Revenue losses;
- Increased disposal costs.

However, conclusions on the size of the reduced revenues and additional disposal costs for original users are affected by uncertainties as information on the number of creosote-treated articles used for secondary applications, on the service life, on the disposal costs and on the choice of the alternatives is lacking in the Background Document and it was also not provided during the consultation on the Annex XV report.

### ***3.4.3.2.5.2. Costs incurred by other professional users in case of restricting the secondary use by the general public (all ROs)***

It is not expected that other professional users will be directly affected when the secondary use by the general public is restricted because those railway sleepers and utility poles that are subjected to secondary use by the general public in the baseline are not considered to be available for sale to other professional users. It depends on whether secondary use by those other professional users would still be allowed. For simplicity, the restriction impacts related to uses by other professional users have been considered separately in this opinion.

### ***3.4.3.2.5.3. Costs incurred by consumers (users of trains and utility networks) in case of restricting the secondary use by the general public (all ROs)***

No major impacts on users of trains and utility networks are expected to be likely due to similar reasoning as described in section 3.4.3.2.2.3.

For those members of the general public that make secondary use of creosote-treated articles, acquisition costs for using creosote-free alternatives likely increase compared to the baseline. It has been reported by the Dossier Submitter that used creosote-treated articles are sold on the second-hand market at very low prices or are even given away for free. It must be noted that, due to the current BPR provisions, the general public cannot substitute second-hand creosote-treated articles with freshly creosote-treated wood in the restriction scenario and thus likely need to invest in other, more expensive solutions depending on the use context

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(which is largely unknown to SEAC). SEAC notes that the number of creosote-treated railway sleepers and utility poles that are used in secondary uses by the general public each year cannot be estimated. However, it is expected that the number may still be significant despite the existing restriction (entry 31).

### **3.4.3.2.6. Final considerations on costs**

In general, concerning the costs of a ban on second-hand wood treated with creosote and creosote related substances, SEAC notes that:

- Costs associated with the restriction proposed by the Dossier Submitter (RO2), as well as the other restriction options mainly depend on whether the chosen alternatives will become less expensive (and safer) in the future.
- RO1 prohibits all reuses and secondary uses, which results in higher costs compared to the other ROs. RO2 results in lower costs than RO1 because it at least allows reuse by the original user. RO3 entails lower costs than RO2, as reuse by other professional users remains allowed in addition to reuse by the original user. The costs of RO4 are expected to be higher compared to RO3 because RO4 bans the reuse by other professional users. Although RO4 allows secondary use by the original user, which is not allowed in RO3, this is not expected to make RO4 more favourable than RO3 because the cost of restricting reuse by other professionals is considered more significant than the cost of restricting secondary use by the original user. Yet, the costs of RO4 are still expected to be lower compared to RO2. RO5 is the least strict option with lower costs than all other options.
- Restriction option RO3 (which is especially interesting to SEAC as shown by later sections), allows reuse by the original user and by other professional users. This limits the costs for the NRIMs or NDSOs to the costs associated with the loss of sales for secondary uses and additional disposal costs for the articles that cannot be sold anymore to secondary uses. Where relevant original users may face additional costs of having to substitute secondary uses of their own articles in RO3. Private railway managers would not incur additional cost related to reuse as their reuse is still possible but, where relevant, they may incur costs of having to substitute secondary uses. The general public is not expected to incur significant extra costs if they are users of railway and utility networks, but those parties that implemented secondary uses of creosote-treated wood may face substitution costs.
- Not all costs for the NDSOs, NRIMs and the private railway managers should be considered as impacts caused by a restriction.
  - In the restriction options that ban the reuse by another actor than the original user (such as RO1, RO2 and RO4), SEAC notes that revenue losses for NRIMs and DSOs are distributional impacts as these losses correspond to saved expenses for the private railways or electricity managers; and
  - In the restriction options that ban the reuse by another actor than the original user (such as RO1, RO2 and RO4), costs on NRIMs, DSOs, private railways or on secondary users in Member States that already have national restrictions in place on reuse and on secondary use should not be considered because in these Member States (such as France) the scenario of introduction of a restriction corresponds to the baseline. Therefore, the impacts on actors in these Member States are due to the national provisions and not to a restriction at EU level.

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The following table summarises the categories of costs that are associated with the different provisions.

**Table 6: Cost categories that are associated with the different provisions. Points a. to e. refer to the building blocks described in section 3.4.3.1.**

Building block	Restriction option	Cost category
1. Restricting the reuse by the original users (NRIMs and NDSOs)	RO1	<ul style="list-style-type: none"> <li>• For original users               <ul style="list-style-type: none"> <li>○ <b>Acquisition costs increase</b> compared to the baseline</li> <li>○ <b>Disposal costs increase</b> compared to the baseline</li> </ul> </li> <li>• For consumers               <ul style="list-style-type: none"> <li>○ <b>Costs of transportation and utility network use are expected to be unchanged</b> compared to the baseline</li> </ul> </li> </ul>
2. Restricting the reuse by other professional users (private railway networks and PDSOs)	RO1, RO2 and RO4	<ul style="list-style-type: none"> <li>• For original users               <ul style="list-style-type: none"> <li>○ <b>Revenue losses</b> compared to the baseline</li> <li>○ <b>Disposal costs increase</b> compared to the baseline</li> </ul> </li> <li>• For other professional users               <ul style="list-style-type: none"> <li>○ <b>Acquisition costs increase</b> compared to the baseline</li> <li>○ <b>Disposal costs decrease</b> compared to the baseline</li> </ul> </li> <li>• For consumers               <ul style="list-style-type: none"> <li>○ <b>Costs of transportation and utility network use are expected to be unchanged</b> compared to the baseline</li> </ul> </li> </ul>
Allowing the reuse by other professional users (private railway networks)	RO3 and RO5	<ul style="list-style-type: none"> <li>• No change in costs compared to the baseline for reuse</li> </ul>
3. Restricting the secondary use by original users (NRIMs (such as embankments) and NDSOs (in construction))	RO1, RO2, and RO3	<ul style="list-style-type: none"> <li>• For original users               <ul style="list-style-type: none"> <li>○ <b>Acquisition costs increase</b> compared to the baseline</li> <li>○ <b>Disposal costs increase</b> compared to the baseline</li> </ul> </li> <li>• For consumers               <ul style="list-style-type: none"> <li>○ <b>Costs of transportation and utility network use are expected to be unchanged</b> compared to the baseline</li> </ul> </li> </ul>
4. Restricting	RO1, RO2,	<ul style="list-style-type: none"> <li>• For original users</li> </ul>

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<p>secondary use by the other professional users</p>	<p>RO3 and RO4</p>	<ul style="list-style-type: none"> <li>○ <b>Revenue losses</b> compared to the baseline</li> <li>○ <b>Disposal costs increase</b> compared to the baseline</li> <li>• For other professional users <ul style="list-style-type: none"> <li>○ <b>Acquisition costs increase</b> compared to the baseline</li> <li>○ <b>Disposal costs decrease</b> compared to the baseline</li> </ul> </li> <li>• For consumers <ul style="list-style-type: none"> <li>○ <b>Costs of transportation and utility network use are expected to be unchanged</b> compared to the baseline</li> </ul> </li> </ul>
<p>5. Restricting the secondary use by the general public</p>	<p>RO1, RO2, RO3, RO4 and RO5</p>	<ul style="list-style-type: none"> <li>• For original users <ul style="list-style-type: none"> <li>○ <b>Revenue losses</b> compared to the baseline</li> <li>○ <b>Disposal costs increase</b> compared to the baseline</li> </ul> </li> <li>• For consumers <ul style="list-style-type: none"> <li>○ <b>Costs of transportation and utility network use are expected to be unchanged</b> compared to the baseline</li> <li>○ <b>For those members of the general public that make secondary use of creosote-treated articles, acquisition costs increase</b> compared to the baseline</li> </ul> </li> </ul>

These costs per each actor are summarised in the table below.

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**Table 7: Overview additional costs for original and professional users and the general public of creosote-treated wood**

	RO1	RO2	RO3	RO4	RO5
<b>Acquisition costs for alternatives</b>					
<b>NRIMs and NDSOs</b>	Increased cost as secondary use is restricted and reuse of sleepers or utility poles is forbidden for the original user. Costs depend on the chosen alternative.	None as reuse by the original user is allowed.			
<b>Private railway companies and PDSOs</b>	Increased cost as reuse of sleepers or utility poles is banned for re-users other than the original one. Costs depend on the chosen alternative.	No changes as reuse of sleepers and utility poles remains allowed for other actors than the original one.	Increased cost as reuse of sleepers or utility poles is forbidden to re-users other than the original one. Costs depend on the chosen alternative.	No changes as reuse of sleepers and utility poles remains allowed for other actors than the original one.	
<b>General public</b>	Increased costs for buying new articles as secondary use by the general public is restricted.				
<b>Revenues from resale of the removed sleepers and utility poles</b>					
<b>NRIMs and NDSOs</b>	Significant loss of revenue as sleepers and utility poles are not sold anymore.	Some loss of revenue as sleepers and utility poles are not sold anymore to the general public but can still be sold to other professional users for reuse.	Loss of revenue as sleepers and utility poles are not sold anymore to the general public nor to other re-users.	Some loss of revenue as sleepers and utility poles are not sold anymore to the general public but can still be sold to other professional users for reuse.	
<b>End-of-life disposal costs</b>					

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<b>NRIMs and NDSOs</b>	Increase as a ban on the reuse and secondary use by the original user and by other actors implies that the original user has to dispose of all removed sleepers and utility poles.	Increase as a ban on the reuse and secondary use by other actors than the original user implies that the original user has to dispose of all removed sleepers and utility poles that cannot be reused by the original user.	Minor increase as creosote-treated wood can still be reused by the original user and by other professional users but the original user has to dispose of sleepers and utility poles that were previously sold to the general public.	Increase as a ban on the reuse and secondary use by other actors than the original user implies that the original user has to dispose of all removed sleepers and utility poles that cannot be reused or secondary used by the original user.	Minor increase as creosote-treated wood can still be reused by the original user and by other professional users but the original user has to dispose of sleepers and utility poles that were previously sold to the general public.
<b>Private railway companies and PDSOs</b>	Similar costs compared to the baseline if the alternative to reuse will be freshly creosote-treated wood. Disposal costs for re-users may decrease in the case of other alternatives.		Minor increase as creosote-treated wood can still be reused by the same user and by other users than the original one but the user has to dispose of sleepers and poles that were previously sold to the general public.	Similar costs compared to the baseline if the alternative to reuse will be freshly creosote-treated wood. Disposal costs for re-users may decrease in the case of other alternatives.	Minor increase as creosote-treated wood can still be reused by the same user and by other users than the original one but the user has to dispose of sleepers and poles that were previously sold to the general public.
<b>TOTAL COST</b>	Highest costs, as RO1 is a total ban.	Costs lower than RO1, as all reuses except the reuse by the original user is banned.	Costs lower than RO1, RO2 and RO4, as reuse by other professionals is still allowed.	Costs lower than RO1 and RO2, as reuse and secondary use by the original user is still allowed. Costs higher than RO3, as reuse by other professionals is banned.	Limited costs, as only secondary use by the general public is restricted.

### 3.4.3.3. Benefits

#### Summary of Dossier Submitter's assessment:

Creosote and related substances are classified as PBT, vPvB and non-threshold CMR, and are thus considered to impose an unacceptable risk, taking into account both the impacts to human health and the environment. Based on these considerations, the Dossier Submitter concludes that exposure and releases should be reduced as far as reasonably possible.

The Dossier Submitter could not quantify the benefits of reduced environmental and health impacts in monetary terms. Based on the Dossier Submitter's qualitative analysis, it is considered that the risk reduction capacities of the two ROs are relatively comparable and positive in relation to the baseline scenario.

It is concluded that the risk reduction potential mainly arises from the elimination of secondary uses, which lead to exposure of the general public and less trained professionals (e.g., contractors operating in the removal of wood). Additionally, the prevention of trade and cross-border movement of treated articles is considered to decrease the likelihood of uncontrolled exposure while increasing the likelihood of adequate disposal. These benefits equivalently apply to RO1 and RO2.

The reduction of article reuse itself is not expected to have a great impact on risk prevention as the exposure of relevant workers (e.g., during stock keeping, transport, installation and maintenance) is considered to remain if reused sleepers are substituted by newly treated sleepers. Releases to the environment are likewise considered to continue. The Dossier Submitter discusses if exposure and releases may even increase if freshly creosote-treated articles are chosen as alternatives to reuse. If safer alternatives are chosen, the stricter ban of reuse in RO1 could lead to higher risk reduction. However, the Dossier Submitter notes that, under the assumption that newly treated wood will be a relevant alternative to reuse, RO1 is expected to increase the consumption of newly creosote-treated wood more than RO2. As a result, RO2 is considered to be more justified.

#### SEAC conclusion(s):

SEAC notes that, concerning the assessment of the hazards of creosote and creosote-related substances carried out in the context of the BPR, RAC concluded that there is an unacceptable risk to the environment and human health associated with the exposure to these PBT, vPvB and non-threshold CMR substances. SEAC concurs with the Dossier Submitter and RAC on the need to reduce releases and exposure as far as reasonably possible.

Although some uncertainties persist in the absence of quantitative information, SEAC finds the qualitative approach adopted by the Dossier Submitter to be fit for the purpose of describing the benefits and verifying the positive outcome for human health and the environment.

SEAC considers that most significant benefits to the environment and human health (directly or indirectly via the environment) result from **prohibiting secondary uses by the general public**. In addition to this, SEAC finds that restricting reuses by professional users (both original users and other professional users) can have negative effects on environmental benefits as long as the first placing on the market of creosote-treated wood is still allowed under the BPR because it gives re-users the opportunity to substitute the reuse of treated wood with freshly creosote-treated wood.

SEAC considers that a combination of restricting secondary uses and allowing reuses by



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professional users under controlled conditions may secure the highest benefits in terms of human health and environmental protection. This allows at the same time to extend the service life of the treated wood and avoid the need to source and use additional energy and raw materials (wood or other) for the production of alternatives and also for the disposal of sleepers and utility poles.

### **Key elements underpinning the SEAC conclusion(s):**

#### Approach to the Dossier Submitter's analysis

SEAC notes that the Dossier Submitter was not able to quantify the environmental and human health benefits of the proposed restriction and only discusses benefits qualitatively. More specifically, this approach seems to rely on the comparison of arguments and the weight of evidence in favour and against a restriction. A qualitative evaluation of benefits is not uncommon in the context of REACH restrictions and, although it was not feasible to approximate the restriction benefits through a quantification of the reduction in exposure and releases, SEAC finds the selected approach acceptable.

SEAC notes that creosote and creosote-related substances are classified as PBT, vPvB and non-threshold CMR, and that the previous assessment in the context of the BPR has considered these substances to impose an unacceptable risk to human health and the environment. SEAC notes RAC's risk-related conclusions and supports the fact that, based on these considerations, the Dossier Submitter emphasizes the need to reduce exposure and releases as far as reasonably possible.

#### Human health benefits

SEAC notes that, according to RAC, due to the high carcinogenic potency of PAHs only a very small daily exposure is needed to cause an unacceptable cancer risk. As a consequence, SEAC agrees that the contribution of the proposed restriction to the reduction of human exposure to creosote and creosote-related substances in treated wood generates human health benefits.

SEAC underlines that, as the general public is considered the population most at risk, avoiding the exposure of this population via the ban of the secondary use by the general public entails direct high human health benefits and is therefore included in all restriction options assessed.

SEAC notes that human health benefits also result indirectly (man via the environment) from reducing environmental contamination due to leaching of creosote from the treated wood articles in use or improper disposal of the wood treated with creosote and creosote related substances.

#### Environmental benefits

As creosote and creosote-related substances are PBT and/or vPvB, SEAC notes RAC's conclusions that the proposed restriction could contribute to reducing risks to the environment (and to human health via the environment) from creosote and creosote-related substances applied to the treated wood.

On the one hand, SEAC considers that, by restricting reuse and secondary use, the benefits to the environment come directly from reducing soil and water contamination.

On the other hand, it has to be noted that the overall environmental benefits could be reduced if more wood, natural resources and energy were needed for producing the alternative sleepers or utility poles. SEAC notes that this would happen not only in case new wood treated with creosote is used but also if other types of alternative sleepers (including copper-treated wooden sleepers, plastic sleepers and concrete sleepers, etc.) or utility poles will require

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additional use of natural resources and energy. Wooden sleepers treated with copper compounds may also lead to copper releases into the environment that may have negative impacts on the environment and on human health via the environment.

SEAC notes that the way disposal is carried out also has a major impact on the environment. If the old treated wood is not disposed of as hazardous waste, there will be negative impacts on the environment as well as on human health via the environment. For instance, in case the old treated wood is (illegally) landfilled, the leaching of creosote and creosote-related substances will contaminate the soil and the groundwater. SEAC also notes that the requirements on the disposal are set under the WFD.

### Approach to SEAC's further assessment of benefits

As explained in section 3.4.3.1., SEAC assesses the five building blocks of the restriction analysed by the Dossier Submitter, which are then combined into different additional 'restriction options' for ease of presentation (see Figure 5).

SEAC considers that, by systematically disaggregating and isolating the effects of the different building blocks in the restriction options, it is easier to assess the benefits to human health and the environment of the different restriction options. This structure could help to identify the restriction option that combines the best balance between economic costs and benefits to human health and the environment. The indication of relative benefit size is approximated with an ordinal scale. It should be considered that (++) and (+++) only indicated which benefit is considered higher in comparison and that the scale does not make conclusions about the total magnitude. Increases may also be non-linear. A neutral benefit is represented by (=) and a negative benefit by (-).

### **3.4.3.3.1. Benefit of restricting the reuse by the original user (RO1 only)**

Among all five options assessed, only RO1 as proposed by the Dossier Submitter prohibits the reuse by the original user. SEAC considers that restricting the reuse of creosote-treated wood by the original user could potentially entail the following positive and negative impacts:

- **HH =)**<sup>20</sup> compared to the baseline if the alternative is fresh treatment (the same level of training and PPE utilization and effectiveness is assumed for reuse and for use of freshly creosote-treated wood and, thus, the same exposure level is assumed)
- **ENV -)** compared to the baseline if the alternative is fresh treatment (more leaching from freshly treated wood than from reused wood)
- **HH and ENV ++)** compared to the baseline if the alternative is safer (however, it is unclear how soon safer alternatives will be considered competitive enough to render the use of freshly creosote-treated wood unattractive; when this point is reached, exposure and leaching of creosote can be eliminated and a clear benefit compared to the reuse of treated wood will be accomplished)

Additional considerations and explanations:

- SEAC notes RAC's conclusions on the risks to the environment and to human health (including human health via the environment).
- The health of the professional workers associated with the original user entity could be benefited by a restriction if they were not sufficiently trained before on how to handle treated articles and if they do not wear the necessary PPEs in the baseline

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<sup>20</sup> This means the human health benefit is considered to be neutral.

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scenario. However, in the context of the BPR and other existing regulations, **the need to utilize risk mitigation** measures for the use of creosote or hazardous substances in general is discussed, and it may be assumed that original users make adequate use of training and PPE.

- The benefits for human health thus **depend on whether the chosen alternative is safer**. SEAC notes that, after the recent re-approval of the original use of creosote for the treatment of wood for railway sleepers and utility poles in the context of the BPR, restricting all reuse may lead to a replacement of reuse of old creosote-treated wood with freshly creosote-treated wood (if the relevant Member State has signed on to the list of EU Member States that continue to allow the first placing on the market of such treated wood).
- Under the assumptions that training and adequate PPE are used by original users and that fresh creosote remains one of the technically and economically most attractive substitutes as long as the BPR allows it, SEAC agrees that the human exposure associated with the first handling of freshly creosote-treated wooden articles could be similar to the exposure from the reuse by the original user, so it **does not appear coherent that the health benefits would be higher if the reuse by the original user were to be restricted**.
- Similar to the context of health benefits, the protection of the environment (and consequently human health via the environment) could be considered to be increased by a restriction of reuse if the chosen alternative is safer. However, as newly creosote-treated articles remain available in numerous Member States and seem to be one of the technically and economically most attractive substitutes, banning the reuse by the original user may increase the use of fresh creosote treatment and thus lead to **even higher releases to the environment**. In this context, SEAC refers to RAC's conclusion that limiting reuse of old sleepers may lead to more use of newly creosote-treated sleepers, which contain more creosote available for leakage than old sleepers and thus have a higher rate of leakage.
- Restricting reuse, and thus reducing the service life of sleepers, may have additional negative environmental impacts related to the **increased use of resources** (e.g., wood), but detailed information is not available to SEAC. The occurrence of **transportation** of sleepers and a potential shift of sleepers to new (previously unexposed) locations is not considered to be impacted by the restriction of reuse as newly creosote-treated wood is available and other alternatives also require transport.
- Likewise, it is likely that adequate **disposal** would be better guaranteed than in the case of the other options (RO2, RO3, RO4, RO5), in this context, the entity responsible for disposal is the original user in any case.

Taking into account the available information, SEAC considers that restricting reuse by the original user (only applicable in RO1) is unlikely to result in benefits to human health and is likely to result in additional negative environmental impacts. In all other restriction options, the original user is allowed to reuse railway sleepers and/or utility poles for electricity or telecommunication in the same Member State and under the same conditions as defined by the BPR. The Dossier Submitter indicated that this reuse will be confined to railway sleepers mainly, and this was substantiated in the dossier.

### **3.4.3.3.2. Benefit of restricting the reuse by other professional users that are not the original user (RO1, RO2 and RO4)**

Three of five assessed options prohibit the reuse by professional users other than the original

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user. SEAC considers that restricting the reuse of creosote-treated wood by other professional users could potentially entail the following positive and negative impacts:

- **HH +)** compared to the baseline even if the alternative is fresh treatment. The Dossier Submitter argues that, in the baseline, there is a risk of inadequate training and use of PPE for professional users other than the original user if they acquire second-hand treated wood. In contrast to that, the risk-related considerations of the BPR would apply if a former re-user becomes an original user of freshly treated wood and thus lower exposure may be assumed according to the Dossier Submitter. However, SEAC notes that all professional users should in theory be obliged to implement adequate occupational safety measures independently of whether their use is subject to the BPR or not. Hence, the restriction benefit may in this case be HH =) (as in the previous section) if worker protection is already correctly enforced in the baseline.
- **ENV -)** compared to the baseline if the alternative is fresh treatment (more leaching from freshly treated wood than from reused wood)
- **HH and ENV ++)** compared to the baseline if the alternative is safer (however, it is unclear how soon safer alternatives will be considered competitive enough to render the use of freshly creosote-treated wood unattractive; when this point is reached, exposure and leaching of creosote can be eliminated and a clear benefit compared to the reuse of treated wood will be accomplished)

Additional considerations and explanations:

- SEAC notes RAC's conclusions on the risks to the environment and to human health (including human health via the environment). RAC considers that an advantage of limiting reuse to the original user in the same Member State and under the same conditions as defined by the BPR is that **trade of old creosote-treated wood between Member States** can be stopped. Thus, an increased control of the old creosote-treated wood is obtained with the Dossier Submitter's proposal. This increased control is considered to reduce the possibilities for any other user to buy old creosote-treated wood via the internet and thus it may also indirectly reduce risks **to the general public** who might seek to buy old creosote-treated wood. However, despite noting this, SEAC considers the option of allowing reuse by other professional users under the assumption that original users could be required to keep the necessary documentation proving to enforcement authorities that they only sold treated wood to other professional companies in the same Member State. A user of creosote-treated wood indicated in the comments to the SEAC draft opinion (comment #1241) that such a practice would be possible to implement in cooperation with the competent bodies. No further information was provided on how to organise such a cooperation and its effectiveness. Therefore, the option of allowing reuse by other professional users in the same Member State and under the same conditions as applicable under the BPR is considered to be **conditional on the ability to control the trade** and inhibit distribution to the general public. If this condition cannot be enforced, SEAC agrees with the Dossier Submitter that the option of allowing reuse by other professional users appears less favourable due to continued negative impacts on the health of the general public.
- Aside from the question of controlled trade, SEAC notes that the notion of creating a positive health benefit through a restriction of reuse by other professional users is based on the assumption defended by the Dossier Submitter that professional workers of other railway companies may not be adequately protected through **training and**

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**PPE.** On the one hand, SEAC agrees that banning reuse by other users would force them to become original users if they want to continue to use creosote-treated wood and, thus, they would be confronted with the considerations of risk mitigation measures linked to the BPR context. On the other hand, SEAC also took into account that similar risk mitigation measures as mentioned in the BPR context could potentially be enforced by other occupational safety regulations or as an **additional condition** to the reuse by other professional users. RAC confirms this in section 3.4.2.

- SEAC notes that a derogation conditional on proper buyer verification and the use of adequate risk management measures could achieve **similar health benefits** as a ban of reuse by other professional users, **while simultaneously increasing environmental benefits relative to RO2** if the alternative is fresh treatment. This is because there would be less contamination (via leaching) to the environment in the case of reuse compared to the alternative use of fresh creosote treatment.

On this point, SEAC notes that RAC confirms that “some railway companies, previously depending on buying cheap, old creosote-treated wood for reuse, now may buy new creosote-treated wood. Choosing new creosote-treated wood is possible according to the BPR if the Member State is accepting the placing on the market, which potentially would increase environmental releases as newly treated wood is expected to release more creosote than old, treated wood, thus increasing the risk to the environment and possibly to humans via the environment for PAHs. There is, however, no risk expected to workers as the BPR requires certain risk mitigation measures and the Biocidal Committee opinion further specifies the risk management measures workers need to consider. Professional users are also expected to understand and/or have access to information on the risks and what measures to take to protect themselves” (see section 3.4.2).

The comparative higher benefit of allowing reuse by other professional users under the mentioned conditions (compared to RO2 with a ban of reuse by other professional users) is, however, not applicable if the chosen alternative is safer. In this case a complete ban of reuse by anyone would maximize worker and environmental benefits.

- The Dossier Submitter assumes that, as management of hazardous waste is expensive, limited economic and financial means may incentivise re-users to seek a cheaper **disposal** solution (e.g., illegal landfilling, which would lead to higher exposure of the environment). The Dossier Submitter thus fears a higher risk of inadequate disposal if not the original user is made responsible for disposal. SEAC questions this effect as the WFD will equally apply to any (professional) user and a potential evasion of this requirement by economically weaker actors may be considered an enforcement problem. It may be considered that enforcement authorities can monitor the adequacy of disposal methods used by other professional users (e.g., through disposal documentation). Actors that cannot (financially) ensure the disposal requirement set by the WFD may in either case need to opt for cheaper, less high performing alternatives as the same requirement will apply if they become original users of freshly treated wood. This could mean that, in the disposal context, there is not such a clear advantage of banning reuse by other professional users (and thus limiting reuse only to the primary user as proposed in RO2).
- Restricting reuse, and thus reducing of the service life of sleepers, may have additional negative environmental impacts related to the increased **use of resources** (e.g., wood), but detailed information is not available to SEAC. The occurrence of transportation of sleepers and a potential shift of sleepers to new (previously

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unexposed) locations is not considered to be impacted by the restriction of reuse as newly creosote-treated wood is available and other alternatives also require transport.

SEAC considers that, compared to the current baseline situation, there seems to be a benefit of restricting reuse by other professional users, but SEAC suggests that a more detailed consideration of the potential benefit of additional conditions and other options is important to be considered. This reasoning takes into account the dependence of benefits on the choice of alternatives. As mentioned in the context of the alternative assessment, re-users are likely to have a choice between freshly creosote-treated wood and other safer alternatives (chemical and non-chemical options). SEAC notes that for technical and for economic reasons the use of wood freshly treated with creosote is currently and will probably remain one of the likely choices as it is still allowed in the vast majority of EU Member States. In fact, except for Cyprus, Greece, Malta and the Netherlands, all 27 EU Member States have signed on to the ECHA list of Member States that continue to allow the (first) placing on their market of creosote-treated railway sleepers. The corresponding list for utility poles is shorter, but the reuse of utility poles is expected to be rarer compared to the reuse of sleepers. SEAC agrees with the Dossier Submitter and RAC that the choice of new wood treated with creosote might increase the risks to the environment compared to the baseline. SEAC notes the ongoing development and testing efforts for safer alternatives (incl. first positive results) and considers that, in the long term, both economic and environmental and health benefits may lead to complete abandoning of creosote. In the meantime, SEAC considers that conditions for re-users may help to safeguard human health if the reuse by other professional users than the original user would be allowed. SEAC notes that if conditions could indeed leave the business-to-business market existing while inhibiting the business-to-consumer market, under the mentioned conditions, the exchanges between the national railway managers and private railway managers may be considered less risky and more beneficial for the environment (and man via the environment). One user of creosote-treated wood that submitted comments on the SEAC draft opinion (comment #1241) indicated that "The relevant prediction [that sales on the second-hand business-to-business market can be limited to professional users only] cannot be substantiated, but in any case it is considered quite likely that the reuse and secondary use of creosote-treated wood and creosote-related substances will not be limited to professional users, resulting in exposure to the general public." SEAC notes that no further explanation or justification for the statement was provided in the comment. SEAC further notes that FORUM, in answering specific questions on the enforcement of RO3, generally considered RO3 as enforceable although some members considered that RO2 would guarantee that other usages and accessibility for the public are prevented by RO2 in a more sufficient way.

Both RO3 and RO5 allow reuse by other professional users in the same Member State and under the same conditions. The difference between these two options is that, in RO3, secondary uses by the original user and other professional users are banned while in RO5 it is allowed. The RO3 option was supported by the German Competent Authority in commenting on the SEAC draft opinion, as such type of reuse could lead to a decrease of newly creosote-treated wood for railway sleepers and therefore have a positive impact on human health and the environment. The Norwegian Competent Authority also indicated that it seems reasonable to allow reuse by other professional users of railway sleepers and utility poles, since the greatest risk is the exposure to the general public and therefore they support the suggested limited use with strict conditions. The German Competent Authority indicated in their comment on the SEAC draft opinion that marketing should not be restricted to the same Member State, but that it should be possible to market the second-hand sleepers in all European Member States on the ECHA list. In contrast, a user of creosote-treated wood that

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reacted to the SEAC draft opinion could agree with the limitation of the marketing to the original Member State. SEAC concurs with the Dossier Submitter that the sales should be limited to the same Member State to facilitate enforcement of the restriction.

SEAC considers that, in case reuse by other professional users is allowed, RAC proposes to introduce a permanent labelling requirement (e.g., in the form of durable engraved steel plates) on each old piece of creosote-treated wood in order to increase the control and possibilities to follow what happens with the old creosote-treated wood. SEAC concurs with RAC that, in such case, permanent labelling would be useful.

### **3.4.3.3.3. Benefit of restricting the secondary use by the original user (RO1, RO2 and RO3)**

Three of five assessed options prohibit the secondary use by the original user. During the third-party consultation on the Annex XV report, a stakeholder commented on the advantages of the secondary use of creosote-treated sleepers by the original user for applications, such as railway embankments. The idea was that the original user (a national railway manager) would still be able to use sleepers for other purposes in the same Member State. This was also brought forward by another user of creosote-treated wood in the comments on the SEAC draft opinion. SEAC is lacking detailed information on how frequently secondary uses as embankments occur in the baseline situation. Based on the total amount of related comments received in the third-party consultation, SEAC expects that the implementation of secondary uses of creosote-treated railway sleepers by the original user is not very widely spread. SEAC considers that restricting the secondary use of creosote-treated wood by the original user could potentially entail the following positive impacts:

- **HH ++**) compared to the baseline (fresh treatment is not an option here; alternatives are assumed to be safer and creosote-related exposure would be eliminated)
- **ENV ++**) compared to the baseline (fresh treatment not an option here; alternatives are assumed to be safer and creosote-related leaching would be eliminated)
- **positive (+) BPR alignment benefit** compared to the baseline (secondary use goes against BPR conclusions finding suitable alternatives for uses other than railway sleepers and utility poles)

Additional considerations and explanations:

- SEAC notes that the worker risk related to secondary uses by the original user may be relatively lower than for secondary uses implemented by the general public. However, this does not automatically mean that the remaining risk is justified in comparison to the alternative scenario.
- A derogation of secondary uses (even if conditional on training and PPE) could potentially decrease worker and environmental benefit **compared to the baseline**. This is because a share of secondary uses is already restricted in the baseline (by entry 31) and, if this would be reversed, currently existing benefits to human health and the environment could be lost again.
- A derogation of secondary uses (even if conditional on training and PPE) would also decrease worker and environmental benefit **compared to the Dossier Submitter's proposal** of banning all secondary uses because conditions for training and PPE are likely not able to reduce the remaining risk of secondary uses as much as refraining from secondary uses would reduce the risk. It should be noted that the situation was more complex in the context of reuse, where the alternative of freshly treated wood was possible and was expected to have own disadvantages (increasing environmental

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releases of creosote). In this case, safer alternatives have been confirmed to be available in the context of the BPR and, thus, there seem to be no benefits to human health or the environment to be gained from derogating secondary uses.

- The extension of the service life of creosote-treated wood may seem like a positive impact of secondary uses for a **circular economy**, however, it is clear that this is traded off against higher exposure of humans and the environment. The alternative to secondary use would be the adequate disposal of the treated wood. In any case, SEAC notes that detailed information on additional resource use is not available to SEAC. The occurrence of **transportation** of material is not considered to be impacted by the restriction as other alternatives also require transport.

The option of derogating secondary uses by the original user was not assessed in detail by the Dossier Submitter and RAC; hence, SEAC's evaluation of this option only allows quite general conclusions on benefits to the environment and to human health (including human health via the environment). Yet, SEAC finds the available arguments to strengthen the use of existing safer alternatives.

### **3.4.3.3.4. Benefit of restricting the secondary use by other professional users (RO1, RO2, RO3 and RO4)**

Four out of five assessed options prohibit the secondary use by other professional users (different user than the original user). SEAC considers that restricting the secondary use of creosote-treated wood by other professional users could potentially entail the following positive impacts:

- **HH +++**) compared to the baseline (fresh treatment not an option here; alternatives are assumed to be safer and creosote-related handling of treated article would be eliminated). The Dossier Submitter argues that, in the baseline, there is a risk of inadequate training and use of PPE for professional users other than the original user if they acquire second-hand treated wood. However, SEAC notes that all professional users should in theory be obliged to implement adequate occupational safety measures independently of whether their use is subject to the BPR or not. Hence, the restriction benefit may in this case be HH ++ (i.e., as in the previous section) if worker protection is already correctly enforced in the baseline.
- **ENV ++**) compared to the baseline (fresh treatment not an option here; alternatives are assumed to be safer and creosote-related leaching would be eliminated)
- **positive (+) BPR alignment benefit** compared to the baseline (secondary use goes against BPR conclusions finding suitable alternatives for uses other than railway sleepers and utility poles)

Additional considerations and explanations:

- As explained in the context of the previous section, a derogation of secondary uses (even if conditional on training and PPE) could potentially decrease worker and environmental benefit both compared to the baseline and compared to the Dossier Submitter's proposal of banning all secondary uses.

Based on the conclusions from the previous section, this option has not been assessed further.

### **3.4.3.3.5. Benefit of restricting the secondary use by the general public (all ROs)**

All assessed options prohibit the secondary use by the general public. The general public is considered to be most vulnerable to the risk associated with creosote and related substances because the exposed people may be unaware or unable to protect themselves. Thus, this



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population is considered to be most at risk and all restriction options assessed aim to ban secondary uses of creosote-treated wood by the general public. SEAC considers that restricting the secondary use of creosote-treated wood by the general public could potentially entail the following positive impacts:

- **HH ++++) compared to the baseline (fresh treatment not an option here, alternatives are assumed to be safer, related handling of treated articles is eliminated, likely no training and PPE in baseline)**
- **ENV ++)** compared to the baseline (fresh treatment not an option here, alternatives are assumed to be safer, related leaching is eliminated)
- **positive +) BPR alignment benefit** compared to the baseline (secondary use goes against BPR conclusions on alternatives for these uses)

Additional considerations and explanations:

- SEAC notes that RAC considers the following: "An increased control will reduce the possibilities for any user to purchase old creosote-treated wood (for instance via the internet), which reduces risks to the general population (mainly through diminished exposure to carcinogenic PAHs)." SEAC agrees that **access of the general population** to second-hand articles treated with creosote must be prevented not only to avoid environmental and health impacts related to the first case of secondary use, but also to prevent **further uncontrollable and unmonitorable distribution** to other members of the general public.
- In the context of the BPR, the first placing on the market and use of creosote-treated wood for uses other than railway sleepers and utility poles has already been excluded. This is based on the finding of **availability of suitable alternatives**. SEAC agrees with the Dossier Submitter that secondary uses of creosote-treated articles cannot be justified in that context.
- SEAC notes that shortening of the service life of a sleeper and substitution with alternatives may imply environmental impacts related to the **additional use of natural resources and energy**, but detailed information is not available to SEAC. The occurrence of **transportation** of material is not considered to be impacted by the restriction as other alternatives also require transport.
- Another important benefit of the restriction of secondary uses by the general public is expected to be the increased likelihood of adequate **disposal** of creosote-treated wood as hazardous waste at the end of the service life because qualified professional users rather than untrained members of the general public will be responsible for disposal. This will lead to lower exposure of the environment and man via the environment.

Based on the clear benefits of restricting secondary uses to the general public, no restriction option has been assessed that would allow this kind of secondary use.

### **3.4.3.3.6. Final considerations on benefits**

In conclusion, in SEAC's view, the following considerations should be taken into account when assessing the benefits of the different restriction options:

- A quantitative evaluation of benefits was not possible.
- All restriction options entail, to different extents, some environmental and human health benefits but also some negative environmental impacts and indirect human health impacts via the environment.

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- The benefits associated with the ban of reuse by the original user and other professional users are dependent on whether the chosen alternative is safer for human health and the environment. Based on SEAC's evaluation of the analysis of alternatives, the answer to this question remains uncertain (see uncertainty section). However, it is certain that numerous Member States will continue to have access to fresh creosote treatment for railway sleepers and utility poles as long as the BPR re-approval is in place. According to the Dossier Submitter, fresh creosote treatment remains an attractive alternative to reuse due to considerations of technical and economic feasibility. The benefits of banning reuse both by the original user and by other professional users thus seem to be limited as long as the use of freshly creosote-treated wood is the most likely alternative.
- SEAC considers that the comparatively higher benefits of allowing reuse by other professional users as opposed to banning it are not only dependent on the choice of alternative (as mentioned above) but also on the definition of several conditions for reuse by professional users:
  - Only as long as the first placing on the market and use is allowed in the context of the BPR;
  - Only under the same conditions for placing on the market of treated articles as defined in the context of the BPR;
  - Only under same risk management measures (also called risk mitigation measures) as defined in the context of the BPR;
  - Only in the same Member State where the original use took place;
  - Only under the condition that control over the business-to-business trade between professional users can be enforced to prevent that members of the general public can access creosote-treated wood for further use.
- Banning secondary uses by the general public is clearly the provision that implies the most substantial benefits.
- The benefits of banning other secondary uses (by the original user or other professional users) seem positive and relatively certain.

Under these circumstances, SEAC considers that RO3 is considered to be the restriction option with the highest relative benefits.

The following table provides a short summary of SEAC's assessment of benefits.

### **Table 8: Comparison of benefits of restricting and derogation conditions for different**

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**restriction options**

	Ban of reuse		Ban of secondary use			Condition of appropriate risk mitigation measures for other professional users and controlled trade
	by original user	by other professional user	by original user	by other professional user	by general public	
<b>Most likely alternative</b>	fresh creosote	fresh creosote	safer alternative	safer alternative	safer alternative	
<b>HH benefits</b>	(=)	(+/*)	(++)	(+++/**)	(++++)	(+/*)
<b>ENV benefits</b>	(-)	(-)	(++)	(++)	(++)	(=)
<b>RO1</b>	Yes	Yes	Yes	Yes	Yes	No
<b>RO2</b>	No	Yes	Yes	Yes	Yes	No
<b>RO3</b>	No	No	Yes	Yes	Yes	Yes
<b>RO4</b>	No	Yes	No	Yes	Yes	No
<b>RO5</b>	No	No	No	No	Yes	Yes

Notes to the table

Note 1. The indication of relative benefit size is approximated with an ordinal scale. It should be considered that (++) and (+++) only indicated which benefit is considered higher in comparison to each other and that the scale does not make conclusions about the total magnitude. Increases may also be non-linear. A neutral benefit is represented by (=), a positive benefit by (+), and a negative benefit by (-).

Note 2. Yes = ban, No = no ban.

Note 3. The asterisk (\*) signals that the conclusion about benefits could potentially be less positive if the assumption by the Dossier Submitter on lower health protection of other professional workers in the baseline is rejected based on the consideration that general and enforceable occupational safety rules apply even in the absence of BPR coverage.

The analysis confirms that most significant benefits can be achieved by preventing the use by the general public. This is applied in all five ROs. Banning the secondary use by the original user and other professional users further generates benefits because safer alternatives have been found to be available by the BPR assessment and because the secondary use of creosote-treated sleepers would result in leaching of creosote into the environment which can be prevented by switching to the available safer alternatives. As indicated in Table 8, RO4 and RO5 still allow secondary uses, therefore, SEAC considers these two options less favourable in terms of benefits. RO1, RO2 and RO3 all prohibit secondary use. RO1 also prohibits reuse by the original user and other professional users, and benefits can be considered limited or even negative in case newly creosote-treated wood is the preferred alternative. When comparing the options with higher benefits, SEAC considers the option of banning reuse by other professional users (RO2) against the option of imposing a condition that other professional users can reuse sleepers only with appropriate risk management measures and under the assumption that it is possible to enforce the ban on trade to the general public (RO3). Between these two ROs, the comparative difference in the health benefits is zero as long as fresh creosote is the most likely alternative. At the same time RO3 may be expected to have higher environmental benefits in this context as there would be less leaching of creosote from reused sleepers into the environment than from freshly treated sleepers.

The following table provides a long summary of SEAC’s assessment of benefits.

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**Table 9: Overview of the human health (HH), environmental (ENV) and man via environment (MvE) benefits for original and professional users of creosote-treated wood**

	RO1	RO2	RO3	RO4	RO5
<b>Human health benefits</b>					
General public (main population at risk)	HH +++)	HH +++)	HH +++)	HH +++)	HH +++)
Professionals of the original user	Unclear, depends on alternative.  As reuse and secondary use by the original user is banned there will be:  HH -) if the alternative is less safe  HH +) if the alternative is safer and these professionals were not protected	HH =) if they are currently exposed they remain exposed while if they are currently protected they remain protected  As professional of the original users can't use anymore the sleepers and poles for secondary applications, there will be:  HH -) if the professionals are not protected during the secondary application and if the alternative is less safe  HH +) if the professionals are not exposed during the secondary application if the alternative is safer and these professionals were not protected	HH =) if professional of the original are currently exposed they remain exposed while if they are currently protected they remain protected  As professional of the original users can't use anymore the sleepers and poles for secondary applications, there will be:  HH -) if the professionals are not protected during the secondary application and if the alternative is less safe  HH +) if the professionals are not exposed during the secondary application if the alternative is safer and these professionals were not protected	HH =) as both reuse and secondary use by the original user is allowed so the situation remains the same as in the baseline	
Professionals of the private railways and PDSOs	HH +) only if these professionals are exposed in the baseline  HH -) if the alternative is less safe  HH +) if the alternative safer		HH =) if professional workers are protected in the baseline  HH +) if these professionals are exposed in the baseline	HH +) if these professionals are exposed in the baseline  HH -) if the alternative is less safe	HH =) as if professional workers can still reuse the sleepers and poles so if they are currently exposed they remain exposed while if they are currently protected they remain protected

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	RO1	RO2	RO3	RO4	RO5
Environmental impacts					
Use of natural resources and energy					
	ENV - - - -) as the full ban entails the need to substitute all removed sleepers and poles with new alternative that have to be produced by using materials and energy  The amount of resources to be used depends on the alternative.	ENV - - -) banning the reuse by other professional users entails the need to substitute the removed sleepers and poles with new alternative that have to be produced by using materials and energy  The amount of resources to be used depends on the alternative	ENV - -) allowing the reuse by the original user and other professional users avoids the use of new alternative sleepers and poles that have to be produced by using materials and energy	ENV - - -) banning the reuse and secondary use by other professional users entails the need to substitute the removed sleepers and poles with new alternative that have to be produced by using materials and energy  The amount of resources to be used depends on the alternative	
Extension of the service life	ENV - - -) as the full ban of reuse and secondary use entails immediate disposal of all dismantled creosote-treated sleepers and poles	ENV - -) as the ban of reuse by other professional actors and of the secondary use entails immediate disposal of all dismantled creosote-treated sleepers and poles	ENV + +) as allowing reuse by the original user and by other professional actors extends the service life of the creosote-treated wood	ENV +) as allowing reuse and the secondary use by the original user extends the service life of the creosote-treated wood	ENV + + +) as allowing reuse by the original user and by other professional actors and secondary use by all actors entails the extension of the service life of the creosote-treated wood
Environmental contamination from the use of the alternative	ENV -) if the alternative to reuses is wood freshly treated with creosote, which leads to higher leakage		ENV -) if the alternative for reuse by another user is wood freshly treated with creosote, which leads to higher leakage	ENV -) if the alternative to reuse is wood freshly treated with creosote, which leads to higher leakage	
Environmental contamination from improper disposal of the dismantled creosote-treated sleepers and poles	ENV and HH MvE +) if the original user properly dispose of the wood treated with creosote		ENV and HH MvE +) if the re-user properly dispose of the wood treated with creosote.	ENV and HH MvE +) if the original user properly dispose of the wood treated with creosote	ENV and HH MvE =) as the professional disposal is done by the same actors as in the baseline

The descriptions related to the different ROs in **Table 9** have been composed of the different provisions (building blocks) described in the section 3.4.3.3.

### 3.4.3.4. Other relevant impacts

#### Summary of Dossier Submitter's assessment:

The non-monetary costs (e.g., functioning of structures and their sustainability) and indirect costs (e.g., for industrial facilities or costs related to GHG emissions) of the proposed restriction could not be quantified by the Dossier Submitter.

#### SEAC conclusion(s):

SEAC considers that some other actors could be positively or negatively impacted by a restriction. However, SEAC does not expect major non-monetary impacts nor costs on other actors.

#### Key elements underpinning the SEAC conclusion(s):

SEAC's conclusion is based on the following arguments and assumptions:

- **Suppliers of creosote formulations** to treat sleepers and utility poles might be positively impacted in the short term if the chosen alternative would be freshly creosote-treated sleepers or utility poles. If the demand for freshly creosote-treated wood will not increase significantly, then no significant impact on these actors is expected. During the third party consultation on the SEAC draft opinion, SEAC received comments from the Coal Chemicals Europe (member of CEFIC) (comment #1245) asking to remove seven creosote related substances that are currently not allowed for wood treatment and they foresee that their presence in the restriction proposal and consequently in the PIC regulation may impact their market negatively in case the EU decides to prohibit production for export of chemicals banned in the EU. No further argumentation has been provided in the comment and the claim has not further been substantiated by SEAC. A comparable comment submitted by the same commenter during the consultation of the Annex XV dossier has been answered by RAC, who indicated that in the case of removal a PAH-analysis would not be able to distinguish banned creosote from not regulated creosote-related substances and then additional chemical analysis would be needed to make sure that the old sleepers were treated with creosote and not with any of the creosote-like substances, making enforcement more difficult.
- **Impregnation sites** might be positively impacted in the short term if the chosen alternative would be freshly creosote-treated sleepers or utility poles. If the demand for freshly creosote-treated wood is not increased significantly, then no significant impact on these actors is expected.
- **Suppliers of alternatives** (such as concrete or plastic) might be positively impacted if the alternative they produce will be chosen instead of reuse or instead of freshly creosote-treated sleepers or poles;
- **Importers of second-hand creosote-treated wood** are expected to be negatively impacted in economic and social terms as all restriction options ban the trade over inner EU borders. Hence, losses of turnover and of employment might occur.

### 3.4.3.5. Proportionality

#### Summary of Dossier Submitter's assessment:

The Dossier Submitter concludes that the costs of the proposed restriction (both restriction

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options) are overall moderate and affordable. The context of the BPR renewal is stated to be a major factor, making RO2 more proportionate than RO1. The further development of other alternatives (e.g., copper hydroxide) as affordable alternatives to creosote treatment is considered to be somewhat inhibited by the continued availability of creosote treatment for uses on railways sleepers and utility poles.

Based on the qualitatively assessed risk reduction potential of the proposed restriction and related benefits for the protection of human health (and especially the general public), the Dossier Submitter concludes that the proposed restriction is proportionate.

### **SEAC conclusion(s):**

SEAC considers that all assessed restriction options are proportionate because every RO bans the use of creosote-treated articles by members of the general public, who are likely unaware of the risks and face a high risk of uncontrolled exposure to creosote and related substances. The benefits of avoiding these health impacts are considered to be substantial. Compared to the most substantial benefit of protecting the general public, the costs of the assessed restriction options are found to be relatively small. Therefore, it is very likely that each RO results in a positive net-benefit.

In addition to the finding that all ROs are very likely to be proportionate, SEAC's assessment looks at the comparison of net-benefits of the different ROs to find the most proportionate one. Based on a qualitative assessment of the costs and benefits, SEAC considers that, compared to RO2, RO3 is the most proportionate restriction option that minimises the costs, while having the same human health benefits as RO2 and higher environmental benefits. This is because RO3 would avoid higher leaching of creosote from freshly creosote-treated wood which remains the most likely alternative (still being allowed under the BPR), and it will save additional natural resources.

However, SEAC notes that this would be the case only provided that:

- Enforcement can be carried out in such a way to ensure that, while allowing the business-to-business sales, sleepers and utility poles would not enter the market in a way that would lead to the general public purchasing these products;
- The same conditions for the placing on the market and risk management measures defined under the BPR will be applied to re-users other than the original one, in order to protect human health;
- If in the future the first use of fresh creosote were not to be reapproved under BPR, then the reuse would be banned as well. SEAC considers that this is already guaranteed by the link to the BPR under the current proposal, and it is the Dossier Submitter's intention.

In case these three provisions are not met, SEAC notes that there would be no advantages from choosing RO3. In this case, SEAC considers that RO2, as proposed by the Dossier Submitter, will be the most proportionate restriction option.

### **Key elements underpinning the SEAC conclusion(s):**

SEAC's conclusions are based on the following elements:

- As the risk to the general public is higher than that to professionals (whether original users or other professional users) and considering that safer alternatives exist for the secondary applications, SEAC finds that the best restriction option would ban with priority the secondary use by the general public.

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- All assessed ROs provide the same substantial benefit for the protection of the members of the general public, which are most at risk of uncontrolled exposure. In comparison to this benefit, the costs of the different ROs are considered to be relatively small.
- RO1 prohibits all reuses, which results in high costs compared to the other ROs. This would result in benefits if the second-hand creosote-treated material is replaced by safer alternatives, but it would result in no or limited benefits if the second-hand creosote-treated material is replaced by newly creosote-treated wood. The latter is considered by SEAC to be the most likely scenario.
- RO3 entails lower additional costs than RO2, as reuses by other professional users will remain allowed as in the baseline.
- RO3 restricts the secondary use by the general public of wooden sleepers and utility poles treated with creosote and creosote related substances that pose an unacceptable risk to human health and the environment.
- The risk posed by the reuse by professional users of creosote-treated wooden sleepers and utility poles would be avoided or reduced if the same conditions set under BPR for the original users are also extended to other re-users. In this case, the human health benefits of RO2 and RO3 would be the same.
- SEAC considers that until the use of freshly creosote-treated wood stops being possible under the BPR, and given the lower prices of this alternative, both the original user and the other professional users would most probably choose this option. Given the potentially higher environmental risks from newly treated wood compared to old creosote-treated wood that has already at least partially leached the creosote and creosote-related substances (as concluded by RAC), risk reduction related to the allowed reuse of the creosote-treated sleepers and utility poles would probably be higher. Therefore, RO3 leads to less risk to the environment than RO2 and RO3 minimises the impact on the environment caused by the potential use of newly creosote-treated wood by other professional users.
- As secondary use by both original users and other professional users is allowed, RO5 is the least strict option with lower costs than for other options as well as the benefits associated with preventing the use by the general public. However, the secondary uses of creosote-treated wooden sleepers and utility poles are already partially restricted under entry 31 and the first use of fresh creosote on any other articles than sleepers and utility poles are completely restricted under the current BPR provisions. SEAC therefore considers that suitable alternatives have been found and that exposure of humans and the environment to creosote resulting from further secondary uses of creosote-treated wood is not justified.
- The costs of RO4 are higher compared to RO3 and the benefits are lower because RO4 bans the reuse by other professional users.

### **3.4.4. Practicality, including enforceability**

#### **Summary of Dossier Submitter's assessment:**

The Dossier Submitter considers the proposed restriction practical since it is implementable, manageable and enforceable.

Elements supporting the conclusion implementability are reported to include the following:



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- Alternatives are already available on the market and used and the proposed restriction allows sufficient time to the impacted supply chains to transition.
- RO2 allows reuse of sleepers under identical conditions.
- Secondary uses of creosote-treated wood are already partly restricted under entry 31 of Annex XVII.

Elements supporting the conclusion manageability are reported to include the following:

- The proposed restriction (both ROs) is easy to understand for affected parties (incl. authorities) and easy to communicate down the supply chain.
- Due to the simplification and clarification of the role of the two regulations involved in this restriction proposal, the administrative burden is not expected to be higher than in the baseline (but easier to manage).

Elements supporting the conclusion enforceability are reported to include the following:

- The proposed restriction allows enforcement authorities to set up efficient supervision mechanisms to monitor industry's compliance with the regulatory measures (incl. the estimation of reused volumes and volumes discarded as waste).
- The implementation of labelling of creosote-treated wood is a simple solution to follow these articles along their service life (incl. the end of life). Labelling can be physical (e.g., engraving on a steel plate, bar code, QR code) or technological (e.g., NFC or RFID chip).
- Enforcement authorities are already enforcing the entry 31.

Elements supporting the conclusion practicability in general are reported to include the following:

- There are no economic impacts on creosote suppliers,
- The proposed restriction (both ROs) is easy to understand and communicate (down the supply chain) by affected parties.

Yet, the Dossier Submitter points out that difficulties in ensuring the adequate and complete disposal under the requirements of the WFD for wood treated before 31 December 2002 were noted.

### **RAC conclusion(s):**

- RAC concludes that the proposed restriction options 1-3 are practical in terms of implementation and manageability. RAC supports SEAC's additional option 3 taking into account the risk reduction for the general public while still allowing reuse under controlled conditions that will reduce exposure and limit the occurrence of creosote-treated wood on the second-hand market.
- RAC agrees with the Dossier Submitter that the proposed restriction is easy to understand and communicate down the supply chain and can be enforced. Enforceability can be improved by ensuring a better access to documentation. The wording of the restriction should be improved to avoid misinterpretations, as suggested in the restriction conditions.
- Overall, the restriction proposal can be considered enforceable as it can be expected that the authorities are capable of setting up efficient supervision mechanisms to monitor the involved actors' compliance with the proposed restriction.

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### **Key elements underpinning the RAC conclusion(s):**

Option 1 addresses all risks related to reuse and secondary use by introducing a complete ban of these uses. However, risks from newly creosote-treated wood are not addressed as this is covered by the BPR approval renewal (Regulation (EU) 2022/1950).

RO2 also bans secondary use but allows reuse by the original user in the same Member State under similar conditions as the original use. Risks from reuse by the original user are not addressed as it is assumed that the actor is aware of and uses the same risk management measures requested by the BPR approval renewal for the newly creosote-treated wood.

RO3 proposed by SEAC, allows reuse for other professional users in the same Member State under the same conditions as proposed by the BPR.

Options 1 and 2 both discuss proper risk and waste management recommendations in the form of labelling, but labelling is not part of the restriction entry text. This labelling can according to the restriction proposal be a physical one, such as an engraved steel plate, a bar code, a QR code or can be a more technological one, such as an NFC or RFID chip. BPR-required "*labels, and where provided, safety data sheets*", should give a lot of information on how to handle newly creosote-treated wood, but contains no information for later use or how the labels should look like. RAC is therefore unsure if the recommended risk reduction measures will be available at the time of reuse (allowed in RO2 and RO3) after the life cycle of the creosote-treated wood (ca. 20 years for sleepers).

The Dossier Submitter also argues that the communication on risks could increase if labelling is developed under the BPR for creosote-treated wood for waste management. The same uncertainty on the longevity of such labelling after the life cycle applies here, and if not present after some 20 years it would not achieve the purpose of better communication. If instead a permanent labelling would be required, it would also improve the enforceability when it is considered that these articles could be followed all along their service life and would ensure a proper follow-up especially at their end of life solely based on the labelling presented on the wood. However, as noted above, the BPR requirement on labels does not require the labels to be permanent or connected to each treated piece of wood (e.g., each sleeper).

RAC notes that the techniques for appropriate hazardous waste management for restriction options 1-3 are available (i.e., incineration of hazardous waste).

RAC notes the issue of the current entry 31 of REACH with regards to the difficulties in the enforceability of wood treated with creosote or creosote-related substance before 31 December 2002 as it is considered normally not possible to determine the date when the wood has been treated with a specific substance and the chemical identity of the exact substance the wood has been treated with.

The restriction proposal is overall aiming for improvement of the current entry 31 of REACH Annex XVII and can be considered manageable as all the involved actors (the industry and the authorities) would suffer no additional administrative burden. RAC notes that to improve clarity and with a reference to paragraph 3 of the conditions proposed for RO2, the definition of "original user" should be further elaborated. RAC also notes that the proposed conditions and risk management measures applicable for professional users must be clear for the other actors as well.

RAC notes that the restriction is implementable as it mainly aims at amending the current entry 31, the involved professional actors are well-aware of the conditions for use under the BPR for creosote-treated wood, and alternatives or newly creosote-treated wood are available for those that are no longer able to reuse creosote-treated wood (e.g., sleepers).

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The Dossier Submitter notes that the secondary uses of creosote-treated wood are already partly restricted under the current entry 31. In addition, the proposed restriction gives sufficient time to the impacted supply chains to transition. The restriction proposal mentions a transition period on 12 months, which RAC supports.

Regarding paragraph 2, the FORUM has doubts whether the restriction applies to wood treated with the substances in the scope of the restriction proposal before 2003, and RAC notes that the restriction text should be clear on this aspect as the intention of the proposal is that it will apply irrespective of when the wood was treated with creosote. It is not clear for the FORUM how the restriction targets treated wood with creosote that is already in use, especially if the treatment was made according to an older legislation previous to the BPR, but RAC notes that the Dossier Submitter has clarified that the intention is that creosote-treated wood already in use can continue to be used according to older legislation.

Regarding enforceability, the FORUM discussed problems associated with sampling sleepers or poles and considers that it would be appropriate to include the four specific marker PAHs (acenaphthene, phenanthrene, fluoranthene and pyrene) for chemical analysis (as proposed in #3767), still anticipating that inspectors in most cases will enforce this restriction by checking documentation or asking the resellers for other relevant additional information.

The FORUM recommends setting a limit value in case an analysis is required. On the other hand, the FORUM advice states that labelling and sampling requirements would be unlikely to be needed as no distribution occurs in those Member States not included in the ECHA list.

RAC notes that all sleepers (most likely to be used for secondary purposes) have been impregnated and would expect that visual inspection and the sharp odour (CICAD 62) would be sufficient elements for effective enforcement. The Dossier Submitter is not proposing chemical analysis or a limit value, and RAC is not able either to propose a limit value if a chemical analysis would be needed, as the concentration of PAH in newly treated and old wood is not known, and the PAH concentration also may vary within a treated piece of wood (e.g., sleeper).

Should a PAH-analysis be considered necessary, RAC notes that CICAD 62 (2004) mentions three studies where PAHs have been analysed in wood using GC-MSD or a combination of GC-MSD and GC-FID.

Comment #3767 suggests removing the creosote-related substances from the restriction, but a PAH-analysis would then not be able to distinguish banned creosote from not regulated creosote-related substances and then additional chemical analysis would be needed to make sure that the old sleepers were treated with creosote and not with any of the creosote-like substances, making enforcement more difficult.

Creosote-treated wood already in reuse or secondary use will probably not be in a proper condition to allow further reuse/secondary use, and this possibility has therefore not been considered further either by the Dossier Submitter or RAC.

### **SEAC conclusion(s):**

SEAC considers that the restriction recommended by SEAC (RO3) is practical since it is implementable, manageable and enforceable.

SEAC considers that also other restriction options, including the one proposed by the Dossier Submitter (RO2), would also be implementable, manageable and enforceable.

### **Key elements underpinning the SEAC conclusion(s):**

#### Implementability and manageability

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SEAC's conclusion on implementability and manageability is based on the finding that the involved actors should be able to understand and comply with a restriction because access to information is available and alternatives are available and economically feasible within the transition period.

### Enforceability

According to the FORUM advice on the enforceability of the restriction, the enforcement activities will be implemented via review of relevant documentation on acquisition, sales and disposal of treated articles.

SEAC concurs with the Restriction Task Force (2017), which previously noted that enforcement of prohibitions on placing on the market and use is more difficult where the goods are being re-sold. As in the current proposals (RO2 and RO3) allowed use is limited to two approved professional applications (sleepers and utility poles), SEAC expects that in this case enforcement is possible. This is in line with the conclusions by FORUM (as described below). SEAC considers that allowing the reuse by other professional users than the original one (RO3) would require to ensure that the business-to-business sales will not end up being business-to-consumer sales, and thus second-hand market enforcement might require more thorough controls. However, SEAC expects that national enforcement authorities will be able to set up efficient supervision mechanisms to enforce compliance with the restriction option recommended by SEAC (RO3).

In its latest advice, FORUM confirmed that RO3 is enforceable with sufficient documentation. However, FORUM considered that, "even though the alternative proposal considered by SEAC [RO3] is enforceable, the original option regarding permissible reuse only by the original user [RO2] would guarantee that other usages and accessibility for the public are prevented in a more sufficient way". This was confirmed by a user of creosote-treated wood in its comments to the SEAC draft opinion which considered it quite likely that the reuse and secondary use of creosote-treated wood and creosote-related substances will not be limited to professional users, resulting in exposure to the general public.

Moreover, FORUM has confirmed that the resources required for enforcement of the restriction do not seem to be higher than the resources currently needed to enforce entry 31 in the baseline scenario. SEAC expects that, in contrast to the current entry 31 of REACH Annex XVII, enforcement could even become easier as no distinction is made in the new proposal between wood treated before and after 31/12/2002 and reuse will be limited to a smaller number of clearly defined applications. FORUM indicated in its last advice that the derogation for reuse by other professional users in RO3 will lead to a comparatively higher number of enforcement actions resulting in higher costs than outlined originally for RO1 and RO2.

SEAC notes that adequate and complete disposal under the requirements of the WFD for wood treated before 31 December 2002 might be difficult to be ensured. FORUM remarks that the tracking of wood once it is considered as waste is performed by the Waste Framework Directive inspectorates and is, in many Member States, out of reach to Chemical Inspectors and REACH enforcement.

In regard to sampling and analysis of wood, FORUM indicated that it would likely be possible to detect certain marker PAH, but that it would likely not be necessary due to the availability of documentation.

Concerning labelling of treated wood, FORUM further came to the conclusion that it may not be necessary to implement such a measure (at least in RO2) if reuse is limited to professional users and to Member States that allow the use of new creosote wood. Following further consultation about RO3, FORUM indicates that a labelling requirement is welcome, but not an

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essential condition ensuring the enforcement of the derogation. RAC considers that if reuse by other actors will be allowed (RO3), permanent labelling should be introduced (e.g., in the form of durable engraved steel plates) to allow an effective hazard communication all along their service life. SEAC agrees with RAC that permanent labelling may increase accessibility to information but questions the cost-effectiveness of this measure. The labelling proposal seems mainly relevant in the context of professional reuse of railway sleepers and utility poles by other professionals than the original users in Member States where its reuse is allowed. All other placing on the market of second-hand articles for further use would be prohibited. SEAC assumes that Internet sales and sales in DIY shops would also be prohibited, and it can be questioned whether labels would further facilitate enforcement. SEAC also notes that the labels will not be obligatory on treated wood disposed of as waste. SEAC expect costs to be significant but could not further quantify total costs of a potential permanent labelling obligation at EU level as very limited information is available on the volumes of second-hand railway sleepers and utility poles placed on the market within the EU.

### **3.4.5. Monitorability**

#### **Summary of Dossier Submitter's assessment:**

The Dossier Submitter considers the proposed restriction to be monitorable. Elements supporting this conclusion are reported to include the following:

- The implementation of the proposed restriction options can be monitored via surveillance programs of national enforcement bodies and existing reporting systems;
- Information on market trends related to the use of alternatives in wood treatment may provide valuable additional information on the regulatory effectiveness of the restriction;
- The implementation of labelling of creosote-treated wood is a simple solution to follow these articles along their service life (incl. the end of life). Labelling can be physical (e.g., engraving on a steel plate, bar code, QR code) or technological (e.g., NFC or RFID chip).

Yet, the Dossier Submitter points out that difficulties in ensuring the adequate and complete disposal under the requirements of the WFD for wood treated before 31 December 2002 were noted.

#### **RAC conclusion(s):**

RAC concludes that the restriction options 1-3 are monitorable.

#### **Key elements underpinning the RAC conclusion(s):**

The monitorability issues are interlinked with the enforcement issues as covered already in the previous section 3.4.4 as one possibility is to monitor the implementation of the proposed restriction options via surveillance programs of national enforcement bodies and existing reporting systems.

No monitorability systems or labelling currently exist allowing to follow the age and the dispersion of treated wood in the environment and the volume of exchange occurring officially and unofficially. Unofficial trade is therefore occurring in many EU Member States, as indicated by internet searches. Following the internet trade of old creosote-treated wood provide another possibility for monitoring how successful the restriction is.

The Dossier Submitter also proposes that the introduction of specific labelling for creosote-

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treated wood under the BPR by national authorities or EU-harmonised codes would allow a better follow up of the treated articles all along their service life. RAC notes that the restriction proposal contains no requirements for labelling, and if such labelling would be proposed they need to be more or less permanent on each item (e.g., sleeper) in order to be effective after the service life of some 20 years use under environmental conditions. See uncertainties on the proposed specific labelling in section 3.5.1.

### **SEAC conclusion(s):**

SEAC considers that RO2, the restriction as proposed by the Dossier Submitter, is monitorable. SEAC also considers that the other restriction options (incl. RO3) are also monitorable.

### **Key elements underpinning the SEAC conclusion(s):**

#### Documentation

As mentioned in the context of enforcement (see section 3.4.4.), monitoring will most likely be achieved through documentation by users and audits by national enforcement authorities and existing reporting systems. Based on that SEAC considers that the implementation and the impacts of the proposed restriction will be monitorable throughout the service life of treated articles until their destruction.

#### Labelling

SEAC concurs with the Dossier Submitter that the introduction of a specific labelling obligation for new creosote-treated wood under the Biocidal Product Regulation (EU) No 528/2012 will allow a better follow up of the treated articles all along their service life in future.

### **3.4.6. Conclusion whether the suggested restriction is the most appropriate EU-wide measure**

#### **RAC conclusion(s):**

- RAC concludes that the proposed restriction (RO2) is an appropriate EU-wide risk management measure for the secondary use and reuse of creosote-treated wood. Restriction option 3 as proposed by SEAC is considered more appropriate as further mitigation of human health and environmental risks are addressed by allowing controlled professional reuse of treated wood in the same Member States.
- RAC concludes that the restriction is targeted to the exposures that cause the environmental and human health risks identified, capable of reducing these risks within a reasonable period of time and proportional to the risk posed by the secondary use of creosote-treated wood for general population.
- RAC concludes that the restriction is in general implementable and monitorable in the EU and also that the restriction is practical and manageable.
- RAC concludes that the restriction is enforceable.

#### **Key elements underpinning the RAC conclusion(s):**

The wording of the current entry 31 under REACH Annex XVII is open for different interpretations and is therefore not considered practical, or effective in addressing risks that would affect the general population through secondary use of creosote-treated wood (see section 3.4.1). This restriction proposal aims at amending the entry 31 to align it with the renewal of the approval of creosote as an active biocidal substance under the BPR, and

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clarifying how the restriction measures would apply to protect the general public. No other legislation could cover the “distribution”, “reuse”, and “secondary use”, as the BPR only applies to the first placing on the market of treated articles.

RAC notes that there are some minor uncertainties regarding the enforceability and monitorability that arise from the unclear proposal for labelling in the proposed restriction. Thus, no labelling is proposed in the restriction proposal, but the text acknowledges the advantages for enforceability and monitorability of having a specific labelling for creosote-treated articles.

Please see section 3.4.4 for justifications on the practicality, including enforceability and section 3.4.5 on the monitorability of the proposed restriction.

### **SEAC conclusion(s):**

SEAC concludes that all assessed restriction options are proportionate due to the substantial benefit of protecting the health of members of the general public in combination with comparatively small costs.

As conditions can be imposed on business-to-business sales so that creosote-treated sleepers and utility poles would not enter the market in a way that would lead to the general public purchasing these products, SEAC concludes that RO3 is the most appropriate restriction option that minimises costs and likely maximises benefits by restricting the secondary use by the general public while allowing the reuse by professional users under the certain conditions for reuse as in the BPR.

SEAC considers that RO3 is implementable, enforceable and monitorable.

### **Key elements underpinning the SEAC conclusion(s):**

SEAC’s conclusion considers the arguments already explained in the proportionality section of this draft opinion.

As described in sections 3.4.4 and 3.4.5, SEAC does not consider that there are major differences in the practicality and monitorability between the various options. SEAC concludes that they are:

- implementable, as involved actors should be able to understand and comply with it because information is accessible, and alternatives are available and economically feasible within the transition period;
- enforceable, as national enforcement authorities are able to set up efficient supervision mechanisms to enforce compliance with the recommended restriction option (RO3) after entry into force. However, SEAC notes that controls on the business-to-business sales should be done in such a way that sales to the general public are avoided.
- monitorable by national enforcement bodies via surveillance programs and existing reporting systems;

## **3.5. SUMMARY OF UNCERTAINTIES**

### **3.5.1. Uncertainties evaluated by RAC**

#### **Summary of Dossier Submitter’s assessment:**

The Dossier Submitter acknowledges that data are not sufficient to perform a quantitative risk assessment. However, data have been considered sufficient to perform a qualitative risk

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assessment.

### **RAC conclusion(s):**

Exposure to PAHs during secondary use is very likely but there is limited data available to allow a quantitative exposure assessment. However, RAC supports that sufficient information is available to justify the need to minimise exposure from reuse and secondary use of wood treated with creosote or creosote-like substances.

### **Key elements underpinning the RAC conclusion(s):**

The scientific uncertainties mainly concern the exposure assessment. It is clear that the level of creosote in impregnated wood decreases with time as a consequence of leaching, and even though exposure during reuse and secondary use is very likely, there are limited data available on the extent of exposure during reuse and secondary use, and also limited data on releases of PAHs fulfilling the PBT and/or vPvB criteria and having carcinogenic properties.

A regulatory uncertainty concerns how to best phrase the restriction entry to obtain the desired outcome. See "Explanatory notes" in section 1 for more details.

Another uncertainty concerns how to enforce the restriction. RAC's view is that chemical analysis may not be needed at all since all sleepers need to have been impregnated (with creosote or creosote-like substances). Coal tar-based creosote has a very typical and strong odour, and that could easily assist in identifying a creosote-treated wood.

### **3.5.2. Uncertainties evaluated by SEAC**

#### **Summary of Dossier Submitter's assessment:**

The Dossier Submitter did not carry out a formal uncertainty analysis as part of the restriction proposal but highlights on a few occasions that missing data impacts the cost assessment.

#### **SEAC conclusion(s):**

SEAC considers that several uncertainties persist on the occurrence and extent of reuse and secondary use in different Member States, on the current and future use of alternatives, as well as on costs, benefits and proportionality. However, even if a quantitative sensitivity analysis is not possible for the variables that contribute to the uncertainties, SEAC also considers that the uncertainties discussed below would not have major impacts on SEAC's conclusions on the effectiveness, practicality and monitorability of the restriction option proposed by the Dossier Submitter (RO2) and of the other restriction options assessed by SEAC (incl. RO3). SEAC also considers that these uncertainties are not expected to prevent the Commission from making its decision on which is the most appropriate EU wide measure.

#### **Key elements underpinning the SEAC conclusion(s):**

SEAC identified the following main uncertainties associated with the baseline scenario as well as concerning the restriction scenario:

- Though reuse and secondary use certainly exist in some EU Member States, uncertainties remain on the existence and volumes of wooden second-hand sleepers currently reused by the original user or by a different user and/or used in secondary applications in other Member States. The specific situation may be quite different in each Member State (see Table B-5). In some Member States reuse occurs, in others it does not. Specific data concerning many Member States with long railway networks (Romania, Sweden, Italy - see Table B-5) are not available. Therefore, the question is whether the available data



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(mainly for France before the national ban) are representative for the European situation and hence can be extrapolated for an assessment at European level. Currently, in France, the national restriction is already in place and creosote-treated sleepers cannot be used anymore by re-users other than the original user. At this stage of the opinion development, it is not known what share of the reuse/secondary use concerns railway sleepers from after 31/12/2002.

- Concerning utility poles, it is not known but it is not unlikely that some reuses and secondary uses exist in some EU Member States by the national or private DSOs.
- The main uncertainties on alternatives relate to the following:
  - The future choice of alternatives by current re-users (incl. touristic railway managers) remains uncertain. It cannot be easily foreseen in advance which types of alternative sleepers will be installed (e.g., concrete, steel, plastic, wooden). Moreover, in case wooden sleepers will be chosen, it is uncertain with which substance they would be treated (creosote, copper hydroxide or other substances). Thus, it remains unclear whether re-users would in the future opt for newly creosote-treated wood or for other safer alternatives, even if new creosote is currently the preferred alternative due to their lower prices.
  - Changes in commercial availability and technical and economic feasibility of alternatives that will be adopted in the future are uncertain and may be dependent on future demand and price.
  - There is limited information on the state of play concerning the replacement of old creosote sleepers by other material and thus the amount of second-hand creosote sleepers that currently reach the market and that will reach the market in the future in the different Member States. This may affect receptivity for alternatives, although the available data suggest still a considerable exchange within the EU Member States and to/from outside the EU exist.
  - Banning of secondary use of railway sleepers will have an economic implication in the secondary uses that rely on second-hand railway sleepers. The information provided for a limited number of applications indicates that alternatives are more expensive, but as information on the volume of sleepers used for secondary use is lacking, the economic impact remains uncertain.
- Uncertainties on the level of professionalism of workers of the national and private railway managers in terms of training and protective measures:
  - If professionals of the private railways or DSOs who are currently installing second-hand sleepers or utility poles for reuse are sufficiently trained and protected by use of required PPE, restriction options leaving the possibility of reuse by another actor than the original user should be preferred as health risks of professionals would be equally protected and the costs will be lower.
  - If professionals of the NRIMs or national DSOs who are currently dismantling sleepers or utility poles and reinstalling them in other locations in their networks are sufficiently trained and protected by the use of adequate PPE, restriction options leaving the possibility of reuse by the original user (in the same Member State and under the same conditions) would have to be preferred as health risks and costs would be avoided, hence increasing the proportionality.
  - If professionals of the NRIMs or national DSOs who are currently dismantling sleepers or poles for transforming them and using them for secondary applications

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(such as embankments) are sufficiently trained also for secondary applications and protected by using the required PPEs, then restriction options leaving the possibility of secondary use by the original user (in the same Member State) would have to be preferred as health risks and costs are avoided and the proportionality of the measure would be higher.

- Uncertainties on the proper disposal as hazardous waste of creosote-treated sleepers and poles by national and private railway managers or national DSOs in terms of training and protective measures:
  - If NRIMs or NDSOs are properly disposing of sleepers or poles as hazardous waste in incinerators with energy recovery, restriction options leaving the possibility of reuse by the original user would have to be preferred as risks to the environment and human health via the environment would be avoided and benefits from extending the service life would be achieved.
  - If private railways or DSOs currently dispose of their sleepers or poles as hazardous waste in incinerators with energy recovery, restriction options leaving the possibility of reuse by another actor than the original user would have to be preferred, as risks to the environment and human health via the environment would be avoided and benefits from extending the service life would be achieved.
  - Similarly, if NRIMs or national DSOs are properly disposing of sleepers or poles as hazardous waste in incinerators with energy recovery, restriction options leaving the possibility of reuse by the original user in the same Member State and under the same conditions, as risks to the environment and human health via the environment would be avoided and benefits from extending the service life would be achieved. Moreover, if national networks would dispose of creosote-treated wood in a better way than the private actors. If, on the contrary national railways or DSOs currently dispose of sleepers or poles ad illegally in landfills or improperly in incinerators without energy recovery, options restricting the possibility of reuse by the original user would be necessary, as risks to the environment and human health via the environment would be avoided. However, SEAC notes that, if improper/illegal disposal is currently done, the major issue might be the current enforcement practices.
- Uncertainties on the different cost categories and their evolution over time for the affected actors (secondary users, re-users other than the original one, NRIMs, NEAs, etc.);
- Whether the trade can be limited to business and ensure that the general public cannot have access to the market of creosote-treated wood;
- Uncertainties remain on the environment and on human health benefits associated with the different restriction options; These uncertainties are related to the absence of quantitative information on volumes reused by original and other professional users and on the preferred alternative(s). The benefit will increase when safer alternatives are used, but not if newly creosote-treated wood is applied. The Dossier Submitter suggested that the limitation of reuse to the original user may increase proper handling in the waste phase and thus increase the benefits, although this was not further substantiated by proper data. Furthermore, uncertainties around the training and use of PPEs by the personnel handling the creosote sleepers and to disposal of the sleepers exist.

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