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Sent via email

Executive Director,
Program Development and Engagement Division,
Department of the Environment,
Gatineau, Quebec K1A 0H3
eccc.substances.eccc@canada.ca

Dear Sir/Madam,

Re: Draft Screening Assessment for Triclocarban

We write on behalf of Ecojustice, Canada's largest environmental law charity, and Environmental Defence, one of Canada's leading environmental organizations advocating for better management of toxic chemicals in Canada. Our organizations are highly engaged in the assessment of substances under the Chemicals Management Plan.

This letter provides comments on the draft screening assessment of the substance triclocarban published for public comment on October 10, 2020.

The draft assessment states that triclocarban's ecological risk was characterized by using the ecological risk classification of organic substances (ERC) approach (ECCC 2016a). Upon reviewing the ERC science approach document, we have concerns about how it was applied to the screening assessment of triclocarban.

After considering a broader set of data than considered under the initial ERC analysis, the draft screening assessment concludes that triclocarban is "high hazard based on its inherent toxicity to aquatic species and its high potential for bioaccumulation in aquatic invertebrates and gastropods." We agree that the limited metrics under the ERC underestimated the hazard of triclocarban. As a known antibacterial agent, triclocarban is a high hazard substance based on its inherent high toxicity to aquatic species and its high potential for bioaccumulation.

The draft screen assessment found the "ERC approach resulted in an exposure classification of low, based in part on its reported use patterns and quantities in commerce (1000 – 10 000 kg, Canada 2017)." We disagree with this assessment.

According to the ERC, substances are considered to be of high exposure potential (exposure class 3) or moderate exposure potential (exposure class 2) as follows:

> *Exposure Class 3 (high exposure potential) was given to substances having the greatest spatial and temporal scale of potential exposure in the environment that fit any of the following criteria:*
>
> > *A half-life in air greater than 2 days and log Kaw greater than 10-06; or*
> >
> > *A Pov greater than 60 daysFootnote6 and a substance quantity reported at 100 000 kg/yr or greater.*
>
> *The substances in Exposure Class 3 are expected to have a longer reaction residence time in the environment (i.e., longer Pov), may undergo long-range transport in air or have been imported or manufactured in higher tonnages in Canada. Therefore, the spatial and temporal scale of potential exposure in the environment for these chemicals is the highest.*
>
> *Exposure Class 2 (moderate exposure potential) was given to substances having the next greatest spatial and temporal scale of potential exposure that fit either of the following criteria:*
>
> > *A Pov greater than 60 days and substance quantity reported between 10 000 - 100 000 kg/yr; or*
> >
> > *A Pov between 21 days and 60 days and quantity reported is greater than 100 000 kg/yr.*
>
> *Classification at this level captures substances with longer reaction residence time (i.e. longer Pov) but lower quantities, or shorter reaction residence time but greater quantities. This class thus does not present a spatial and/or temporal extent of potential exposure as high as an Exposure Class 3 substance. Exposure Class 2 substances are not expected to undergo long-range transport in air.*

While reported imports of triclocarban as a chemical may be in the 1000 – 10,000 kg range, it is also found in consumer products that are imported into Canada, including in bar soaps and facial cleansers, as well as over-the-counter medicated soap.

Given triclocarban is in consumer products that may be used anywhere in Canada at any time, there is a great spatial and temporal scale of potential exposure in the environment. As a substance found in consumer products, triclocarban is not used in one or a few locations in Canada like some industrial chemicals, nor is it only used at specific times, such as during a specific industrial process. Therefore it meets the first requirement of a high or moderate exposure potential as described in the ERC approach.

Although not a substance that will undergo long-range transport, it has been found to be persistent. The draft screening assessment does not discuss the overall persistence of triclocarban despite it being a factor in determining its exposure class under the ERC approach. At least one study that examined the half-life of triclocarban in four soils found it to be persistent with a half-life ranging from 74 to 101 days[1] in the soils studied. Studies of biosolids applications have found that triclocarban soil residues remained

[1] Fu Q, Sanganyado E, Ye Q, Gan J. Meta-analysis of biosolid effects on persistence of triclosan and triclocarban in soil. Environmental Pollution. 2016;210 (Complete):137-144. doi:10.1016/j.envpol.2015.12.003.

years after biosolid application.[2] Given quantities in commerce reported as high as 10,000 kg per year, evidence of persistence and while applying the precautionary principle, triclocarban meets the classification of a moderate exposure potential (or exposure class 2) under the ERC approach.

Based on the ERC risk classification matrix, a high hazard substance of moderate exposure (exposure class 2) is considered to be a high risk. Even if triclocarban was not found to meet exposure class 2, a high hazard substance of low exposure risk (exposure class 1) is still considered to be of moderate risk (ERC Table 7.1). There is no classification within the ERC approach where a high hazard substance can be found to be of low risk.

Furthermore, none of the adjustments provided for in section 7.1 of the ERC approach apply, nor does the draft screen assessment indicate any adjustments were made to the risk classification based on this section of the ERC document. It is impossible to conclude the triclocarban is low risk based on the application of ECCC's ERC classification science approach document. At minimum it is moderate risk, if not high risk based on evidence of high persistence in soils.

Finally, it is important to note that the use of triclocarban in consumer products, and consequently exposure and release, may increase significantly as a result of the phase out of triclosan from many consumer goods such as bar soap bar as the Canada's Pollution Prevention Plan and actions in other jurisdictions take effect.

We recommend that ECCC revisit the risk categorization for triclocarban and as such the proposed conclusion with respect to the toxicity of triclocarban, as defined under section 64 of CEPA.

Sincerely,

Elaine MacDonald
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Muhannad Malas
Program Manager, Toxics - Environmental Defence

[2] Lozano N, Rice CP, Ramirez M, Torrents A. Fate of triclocarban in agricultural soils after biosolid applications. Environ Sci Pollut Res Int. 2018 Jan;25(1):222-232. doi: 10.1007/s11356-017-0433-0. Epub 2017 Oct 13. PMID: 29027081.