



Microplastic infill in sport pitches

NGO additional comments on the Commission's proposal

15 Nov 2022 - The European Environmental Bureau & ClientEarth

As part of its proposal to restrict all intentionally-added microplastics, the European Commission is considering a ban on synthetic polymer infill materials in artificial sport pitches. The ban would enter into force after a six-year transitional period.

Sport pitches are the largest contributor at EU level in terms of quantities of intentionally added microplastics both used and released to the environment,¹ with potential toxic chemical leaching.² Yet, they continue to be built year on year.³

To remedy the pollution associated with the use of microplastics in sport pitches, the initial ECHA proposal included either a ban on the use of microplastics as infill, or risk-management measures to prevent the loss of microplastics from sport fields.⁴ We concur with the Commission that <u>a ban is by far the best instrument to reach the EU ambition</u>, as supported by the following considerations:

→ Alternative - safer - solutions are available, including organic infill materials⁵ and solutions without any infill.⁶

¹ RAC Opinion, dated 11 June 2020, p.55. For more information on the environmental impact of artificial pitches, see: Plastic Pitches - Fidra

² Release of particles, organic compounds, and metals from crumb rubber used in synthetic turf under chemical and physical stress I SpringerLink

chemical and physical stress | SpringerLink

³ Eunomia Research & Consulting (2018) Investigating options for reducing releases in the aquatic environment emitted by (but not intentionally added in) products. *Report for DG Environment of the European Commission:*

http://ec.europa.eu/environment/marine/good-environmental-status/descriptor-10/pdf/microplastics_fin_al_report_v5_full.pdf

⁴ ECHA Annex XV Report: Microsoft Word - rest microplastics axvreport en.docx (europa.eu)

⁵ A list of alternatives on the market can be found at:

https://www.fidra.org.uk/artificial-pitches/plastic-pitches/solutions/#infills. See also for example, the FIFA certified cork infill: https://domosportsgrass.com/en/performance-infill/domo-naturafill and FIFA certified organic infills and examples of sport pitches:

https://www.realsport.fr/sites/default/files/2021-05/RS_FT_Purefill%20-F_web_%202020%2013.05.2021.pdf, https://www.mediterranee-environnement.fr/blog/rea/stade-bouissou/

⁶ original DFB-Recommendations-Microplastic 2022.pdf

- → Existing bans at regional or municipal level have proved to work⁷, without negative consequences in terms of cost or performance of the alternatives.⁸ An EU ban is expected to boost the alternatives' market in Europe, and beyond.
- → Risk-management measures alone do not work effectively, in part due to poor enforceability. Recent studies show that implemented risk measures and information campaigns have had limited impact.⁹ For example, nationwide inspections carried out in Norway during the summer 2022 reveal that 72 out of 88 football pitches do not comply with the regulatory framework in place.¹⁰ According to ECHA, the strictest pollution controls predict an estimated release of 50 kg of granule pollution per pitch.¹¹ RAC considered that "technical risk management measures are potentially simple to implement if foreseen during the design and (re)construction phase of synthetic turf sport pitches". However they will be "less easy to implement (retro-fit) to existing pitches".¹² That comes in addition to the pollution induced by the problematic disposal of pitches.¹³ Foreseen climate changes are expected to make even harder any efforts to control the loss of granules.¹⁴
- → A ban is the most cost-effective option. The turfs used by professional players account for a small proportion of all sport pitches while most fields are in fact used by communities, i.e. mostly schools and kids. That means most of the costs related to the use, renovation and end of life of pitches are borne by local authorities, yet with oftentimes limited resources to do so. In that regard, a Norwegian study estimates that transitioning to systems with organic infill will be more cost-effective in the long term.¹⁵ That is also because turfs made of recycled materials' fiber are considered to have better climate footprint and require lower energy use.¹⁶ It should be remembered that despite possible costs for the industry, SEAC noted that a full ban was a proportionate option.¹७

To be fully effective in reducing microplastic' pollution, a ban should however come with the guarantee that:

- All plastic particles are covered, including biobased and biodegradable infill. Organic materials mixed with plastic particles for example sand should also be included in the ban.
- During the 6-y period, the pollution from pitches in use is minimised. In average, the lifespan of a synthetic turf system is 10-12 years before the entire carpet is replaced. New solutions should be introduced gradually while turfs are

⁷ Hamburg in Germany has been using sand for the past 10 years; in France, La Ciotat and other cities are using olives stones, locally available, Baud and Cholet too.

⁸ Personal communication Mr. Torge Hauschild, City of Hamburg

⁹ See for example study by Ragn- Sells (Sweden) on a synthetic turf installed at Bergavik's IP (Kalmar, Sweden) - see details in RAC and SEAC Opinion, p. 63.

¹⁰ Norwegian Environment Agency, Inspections of polymer infill 2022, M2363 November 2022. EPA article and report: <u>Gummigranulat på kunstgrasbanar: Mange manglar tiltak for å hindre spreiing - Miljødirektoratet (miljødirektoratet.no)</u>

¹¹ RAC and SEAC Opinion on microplastics restriction report, p. 64: <u>b4d383cd-24fc-82e9-cccf-6d9f66ee9089</u> (europa.eu)

¹² RAC and SEAC Opinion, p. 62.

¹³ Zembla (2018) 'What happens to plastic and polluting artificial turf?'

¹⁴ https://www.miljodirektoratet.no/globalassets/publikasjoner/M741/M741.pdf

¹⁵ SIAT NTNU 2022 (in the process)

¹⁶ Hanuschik, Berghaus 2022

¹⁷ RAC and SEAC Opinion, pp. 154-155.

being renovated, stimulating changes as soon as possible and thus also avoiding new investments in synthetic polymer infill. Most pitches should be renovated during the proposed transition time of six years.

• Other instruments are implemented in support of the ban, such as EPR/ take-back obligations, certifications and financial support connected to the transition to alternative infill and related-investments.¹⁸

The infill, the turf and the shockpad form a system that must be well designed from design to disposal - hence any solution to the microplastics pollution stemming from that source should take into account waste management practices, including best recycling solutions for tires and adequate waste handling of hazardous materials.¹⁹ Banning microplastic infill in sport pitches is therefore no silver bullet but it is still a mandatory first step.

Useful links and documentation

KG2021 documentation/ files from NTNU i Norway

Alternative Infill cases, by FIDRA

Guidance for cleaner Pitches by FIDRA and KIMO

German Football Association DFB, <u>Microplastic Discharge from Existing Synthetic Turf</u> <u>Pitches</u>

¹⁸ City of Hamburg, procurement guideline synthetic turf

¹⁹ SIAT NTNU Project KG2021 2022 (in process)