

How to tackle the environmental pollution by Veterinary Pharmaceuticals?

Pharmaceuticals are increasingly found in the environment, including surface and groundwater, many of them at ecological relevant concentrations. A high degree of coherence between various areas of legislation e.g. on veterinary pharmaceuticals, on water protection, and on animal husbandry can help to enhance the situation. On the backdrop of the current revision of the European veterinary medical product regulation and the public debate about industrial livestock farming, antimicrobial resistance and responsible animal husbandry, this Position Statement lists recommendations in a nutshell.



Position Statement



Background

Pharmaceuticals are increasingly found in the environment. Low biodegradability of pharmaceuticals and their persistence in surface water, sediments and soils pose a threat to the environment. Numerous veterinary medical products that are in use were authorised before environmental impact assessment became an obligatory element of the authorisation process. Our knowledge about their environmental behaviour and impact is still very limited. Regular environmental review intervals for once authorised veterinary pharmaceuticals are not in place. And an obligatory environmental monitoring system for pharmaceuticals in the environment is not established. Information on the amount of veterinary medical products used in the member states is incomplete or missing altogether.

Standard long-term tests conducted with aquatic organisms like fish, daphnia, and algae revealed effects at concentrations of less than 1 Microgram per litre ($\mu\text{g/l}$), some even at much lower concentrations – concentrations that have already been detected in water bodies. Also soil organisms like bacteria and fungi are affected by environmental residues of pharmaceuticals. Dung fauna - which plays an important role in decomposing processes in ecosystems - have shown increased death rates caused by residues of antiparasitics in organic manure. This can result in a reduced decomposition of the manure on the fields. And as another consequence animals which are living on dung insects as food source like birds, hedgehogs and strews suffer from their decline.

As long as humans keep animals there will be a need for veterinary medicines to cure animal illness and reduce pain. But the way animals are bred, kept and fed has an enormous impact on their wellbeing and health. Good husbandry therefore is one key factor not only to ensure animal welfare but also to reduce the use of pharmaceutical use and in consequence the occurrence of veterinary pharmaceuticals in soils, surface water, groundwater and drinking water.

Recommendations

To improve the situation PAN Germany makes the following recommendations:



To enhance the protection of the environment from adverse effects of pharmaceutical pollution a high degree of coherence between various areas of legislation is needed. This includes among others legislation on veterinary pharmaceuticals, on water and soil protection and on animal husbandry.



To close the existing data gap regarding the occurrence and effects of pharmaceuticals in the environment a systematic environmental monitoring with transparent publishing of data should be established.



Special attention should be paid to substances which specifically affect the environment, e.g. substances that are persistent, bioaccumulative and toxic (PBT), substances with endocrine disrupting properties (e.g. hormones) or substances which are released in large quantities.



A feedback mechanism from monitoring data to authorisation and use of pharmaceuticals should be established. E.g. eco-monitoring data should find their way into the pharmacovigilance system (reporting system for adverse effects of pharmaceutical products).



Threshold values for pharmaceutical residues in water bodies should be set.



Regular environmental review programmes for authorised veterinary pharmaceuticals should be introduced. A start should be made with those veterinary medicinal products that have never been tested for their environmental impact.



Specific goals for reducing the amount of antibiotics used in livestock farming should be set and controlled.



Prevention has to come first. Healthy animals don't need pharmaceuticals. Therefore husbandry practices that foster animal health should be promoted and subsidies on all levels that hinder such efforts should be stopped.



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PAN Germany Background Information



Demands for an Improved Protection of the Environment from the Adverse Effects of Veterinary Medical Products. Position Paper. (2013)

http://www.pan-germany.org/download/veterinary_pharmaceuticals/Enhanced_Protection_of_Environment_from_Veterinary_Medicinal_Products.pdf



Background Paper on Pharmaceutical Pollutants in Water and the Revision of the EU Groundwater Directive. (2013)

http://www.pan-germany.org/download/tierarzneimittel/pharmaceutical_pollutants_in_water.pdf



Background Information on the European veterinary medicinal products legislation. (2012)

<http://www.pan-germany.org/download/tierarzneimittel/tierarznei-EN-130207-web.pdf>

Further information and links

PAN Germany online information on veterinary medical products in the environment. Background information and positions.

www.pan-germany.org/gbr/project_work/veterinary_pharmaceuticals.html

German Federal Environment Agency: Online information on pharmaceuticals in sludge, slurry and soil.

<http://www.umweltbundesamt.de/en/topics/pharmaceutical-residues-can-affect-soil-organisms>

To follow the political process

European Commission Directorate General Health & Consumers. Online information on the revision of the legal framework for veterinary medicinal products. Key documents & news.

http://ec.europa.eu/health/veterinary-use/rev_frame_index_en.htm

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