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PROJECT

FP 6

Water

Pharmaceutical Products in Environmental Waters (KNAPPE)

 [1]

Pharmaceuticals in the environment is an issue receiving growing attention. Over the past few years, the amount of research on the potential environmental effects and risks of pharmaceuticals has greatly increased. It thus becomes essential to point out key issues to be addressed in order to increase the effectiveness of research. The EU project KNAPPE aims to identify relevant priority actions to be taken in order to reduce the occurrence, impacts and risk of pharmaceutical products in the aquatic environment.

Background

Scientists agree that there is nowadays an increased presence of pharmaceutical products (PPs) in the environment, including the aquatic one. However, knowledge on the nature and extent of the environmental impact of PPs is still limited. Few cases of significant environmental impact of PPs have been confirmed so far. Especially some classes of PPs can act as endocrine disrupters, which have been linked to abnormalities and impaired reproductive performance in some species, mainly fish.

Despite our limited current understanding of this emerging environmental issue, the scientific community tends to agree that we should already explore ways of limiting the input of PPs into the environment, anticipating thus action needed in the near future. Moreover, although the environmental concentration of PPs is considered to be too low to have an effect on human health, public

demand for drinking water of good quality - free of chemical substances - cannot be overlooked by water managers.

Project objectives

One of the main aims of the EU KNAPPE project is to bundle and extend research on the occurrence of PPs in the aquatic environment as well as on the environmental and health impacts related to PPs. On this basis, the project aims to identify the relevant priority actions to be taken in the framework of sustainable development, in terms of lowering the presence, impacts and risk of PPs.

In order to achieve these overall aims, KNAPPE pursues the following **objectives**:

- Establish a list of PPs most relevant in terms of exposure in the aquatic environment, identifying major gaps in data availability and quality,
- Investigate the elimination efficiency of treatment processes (sewage treatment, drinking water production, specific industrial processes),
- Present an overview of the eco-toxicological significance and health impacts of PPs,
- Develop a classification system to prioritise the environmental risks of PPs, thus supporting water managers and health authorities to minimise point and diffuse pollution of water,
- Assess current regulatory and policy approaches at EU level and specific Member States and identify options for the design of future policy instruments to limit water pollution from PPs,
- Make recommendations for environmental stewardship (pollution prevention and monitoring) integrating green technology and ecopharmacovigilance schemes.

Ecologic in KNAPPE

Ecologic is lead of Work Package 3 (WP3), which aims to develop cornerstones of a future EU prevention action on the discharge of PPs into the water environment. The work involves a review of existing legislation instruments and policy approaches on the authorisation, discharge and monitoring of PPs at the EU level and in selected Member States. The review will serve as a basis for the identification of possible gaps in current approaches. Ultimately, it will contribute to the formulation of recommendations for an appropriate EU policy instrument mix to deal with the issue of PPs in water.

On 29-30 April 2008, Ecologic co-organised an expert workshop on Environmental Stewardship of Pharmaceuticals & Policy

Instruments in York, UK. The workshop was partly used to discuss the current EU policy framework related to PPs in the water environment, to identify key instruments which should be focus of possible action and to formulate further research needs.

Results of Work Package 3 so far include the following reports:

- State-of-art review of policy instruments to limit the discharge of pharmaceutical products into European waters [2] [pdf, 426 KB, English]
- Proceedings of the expert workshop on the design of instruments to limit pollution from PPs [3] [pdf, 2.5 MB, English]

Ecologic also supports the work of Work Package 5, where it contributes to the review of environmental classification, ecolabeling and take-back schemes of PPs.

Further Links

- European 6th Framework Programme

Funding

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Links
[1] https://www.ecologic.eu/sites/files/project/2016/fotoliac_jcjg_photography_xl_0.jpg
[2] https://www.ecologic.eu/sites/files/download/projekte/1850-1899/1878/knappe_d31_state_of_art_policy.pdf
[3] https://www.ecologic.eu/sites/files/download/projekte/1850-1899/1878/knappe_d32_proceedings_york_instruments.pdf