

EXPIRED MEDICINES CAN BE TAKEN TO A PHARMACY

Finland, Estonia, Latvia, and
Sweden - pharmaceutical
waste can be taken to a
community pharmacy.

More info: **Meds Disposal**
<http://medsdisposal.eu/>



/centralbalticwaterchain

waterchain.eu



EUROPEAN UNION
European Regional Development Fund



Interreg
Central Baltic



Water
Chain



PYHÄJÄRVI INSTITUTE



TURKU AMK
TURKU UNIVERSITY OF
APPLIED SCIENCES



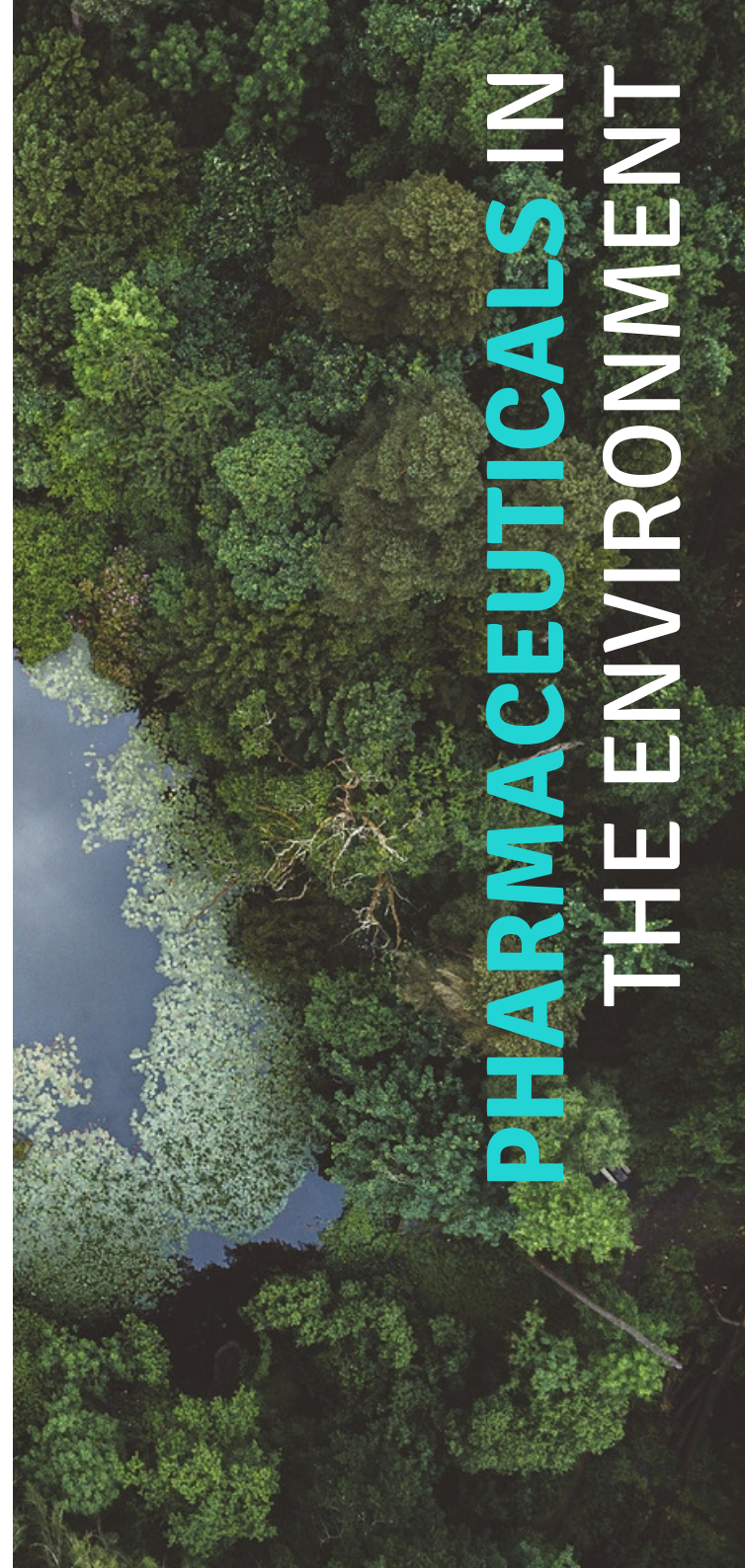
TALLINN UNIVERSITY OF
TECHNOLOGY



1862
RIGA TECHNICAL
UNIVERSITY



samk | WANDER



PHARMACEUTICALS IN THE ENVIRONMENT

01

Global increase in medicine production and consumption has increased the load of pharmaceuticals in the environment.

02

Medicines enter the environment through sewage treatment plants, hospitals, and the effluents of livestock farms. Pharmaceutical production facilities with inadequate sewage treatment are also a risk.

03

The components of various medicines have been detected in lakes, rivers, the sea, and groundwater.

04

Side effects include: disturbances of aquatic organisms' reproductive systems, growth and behaviour.

05

Little is known about low concentration exposure over a longer period of time, due to the cost and complexity of such studies.

ATTENTION SHOULD BE PAID TO THESE ACTIVE PHARMACEUTICAL INGREDIENTS.

METFORMIN

Active ingredient in prescription drugs: Metfogamma, Metforal, Metformin-Ratiopharm and others.

Used in treatment for Type II diabetes mellitus.

Causes feminization and reduces fecundity in male fishes.

ETHINYLESTRADIOL, LEVONORGESTREL

Hormonal medication used for birth control (contraceptive pills, intrauterine devices, implants).

Causes feminization of male fish and female fish to produce fewer or no eggs.

IBUPROFEN

Active ingredient in over the counter or prescription drugs: Ibuflux, Ibumax, Ibumetin, Nurofen, and others.

Analgesic, anti-inflammatory, and antipyretic drug.

Affects the reproductive cycles of fish, inhibits the growth and reproduction of aquatic organisms.

DICLOFENAC

Ingredient in over the counter or prescription drugs: Naklofen, Voltaren, Dicloflex and others.

Used to treat inflammations, pain, and rheumatic diseases.

Toxic to vultures, causing kidney failure.

Causes cellular changes in the liver, kidneys, and gills of fish.

