

Health Care Without Harm (HCWH) Europe





Pharmaceuticals In The Environment – A Call For Action

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www.noharm-europe.org

HCWH VISION, MISSION AND GOALS



Vision

Healthcare mobilises its ethical, economic and political influence to create an ecologically sustainable, equitable and healthy world.



Mission

Transform healthcare worldwide so that it reduces its environmental footprint, becomes a community anchor for sustainability, and a leader in the global movement for environmental health and justice.



Overarching goals

1. Protect Public Health from Climate Change
2. Transform the Supply Chain
3. Build Leadership for Environmental Health

RIGHT TO ENVIRONMENTAL HEALTH AND ACCESS TO HEALTH CARE

← → G saferpharma.org



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Join the Safer Pharma campaign to challenge the pharmaceutical industry and legislators to protect human and environmental health in Europe

[Join the campaign!](#)

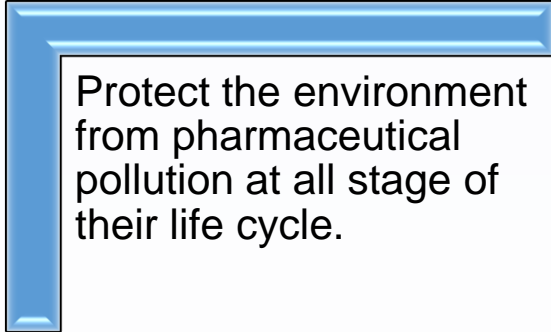
SAFER PHARMA CAMPAIGN



The aim of this campaign:



Achieve new EU legislation that starts curbing pharmaceutical pollution, an EU law that will take action, which in turn will lead to a measurable reduction of pharmaceuticals in the environment over time.

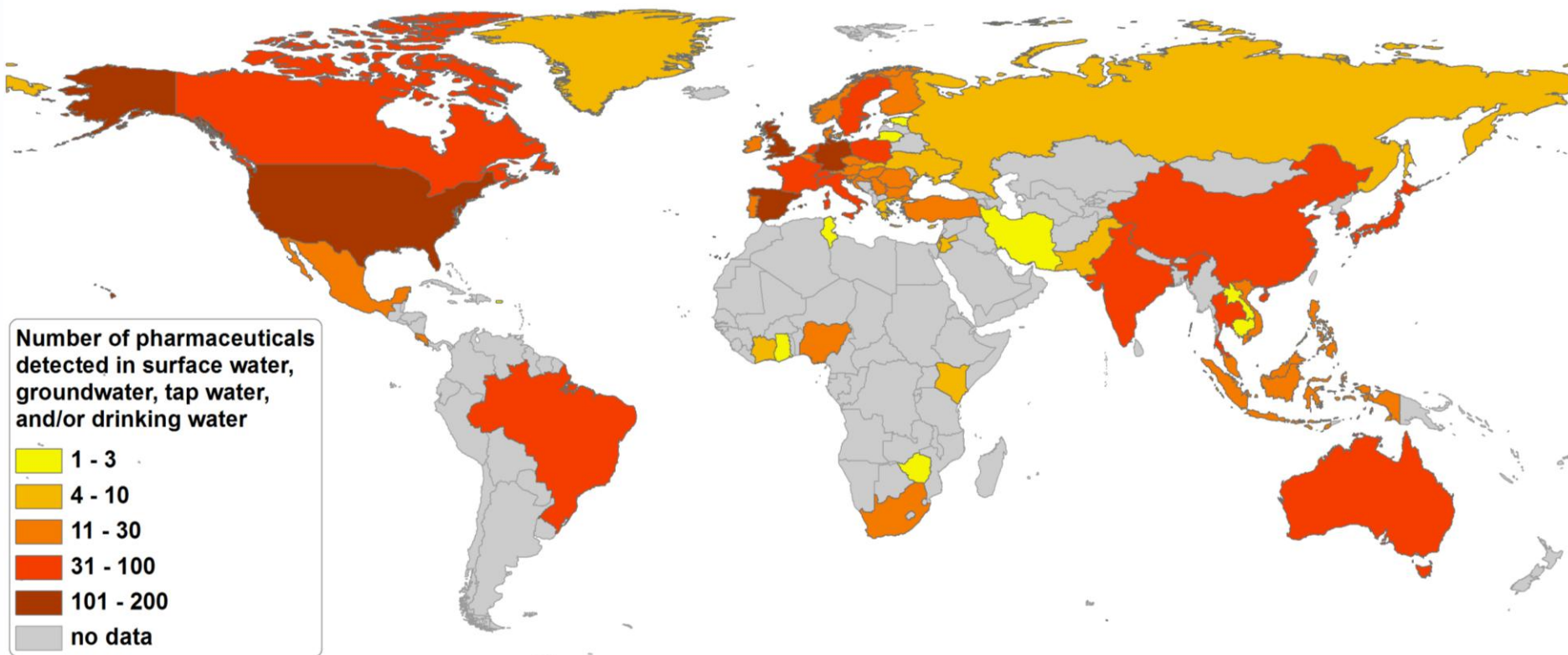


Protect the environment from pharmaceutical pollution at all stage of their life cycle.

Facts



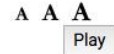
**IWW, 2014 => 631 pharmaceuticals detected
(of 713 analysed) in 71 countries across all
continents**



THE E
FOR TH

Rampant pollution in Hyderabad industrial areas

By Patlolla Niroop Reddy | THE HANS INDIA | Jun 04, 2016, 11:58 PM IST



Dial 9555248188 To Install The Hans India App for Amazing Offers From **GrabOn**



On the UN-declared World Environment Day on June 5, observed the world over, it has become a ritual to think of the most contaminated sites, from the point of view of environmental degradation. One such patch on the face of the Earth is located on the

SERVOIR
MICROBIAL



+ Add to myFT

pharmaceutical supply chains ght

to take action

tical
FAMR

OPEN ACCESS PEER-REVIEWED

RESEARCH ARTICLE

A Treatment Plant Receiving Waste Water from Multiple Bulk Drug Manufacturers Is a Reservoir for Highly Multi-Drug Resistant Integron-Bearing Bacteria

Nachiket P. Marathe, Viduthalai R. Regina, Sandeep A. Walujkar, Shakti Singh Charan, Edward R. B. Moore, D. G. Joakim Larsson, Yogesh S. Shouche

Published: October 29, 2013 • <https://doi.org/10.1371/journal.pone.0077310>

Article	Authors	Metrics	Comments	Related Content
▼				

Abstract

- Introduction
- Materials and Methods
- Results
- Discussion

Abstract

The arenas and detailed mechanisms for transfer of antibiotic resistance genes between environmental bacteria and pathogens are largely unclear. Selection pressures from antibiotics in situations where environmental bacteria and human pathogens meet are expected to increase the risks for such gene transfer events. We hypothesize that waste water treatment



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Keywords: Pharmaceuticals; Antibiotics; Environment; Effluent; Toxicity

Journal of
Hazardous
Materials

www.elsevier.com/locate/jhazmat

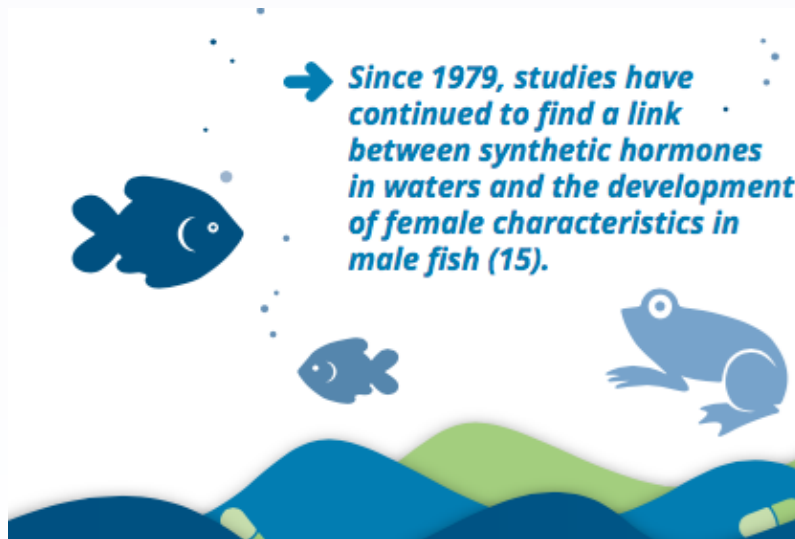
extremely

s Paxeus^b

134, SE-405 30 Göteborg, Sweden
Göteborg, Sweden
July 2007

It is via sewage treatment plants receiving wastewater treatment plant serving about 100,000 people that c drugs for the world market. The samples analyzed broad-spectrum antibiotics raise concerns about the presence of active pharmaceutical ingredients from

How Can Pharmaceuticals in the Environment Affect the Aquatic Biota?



→ A recent study shows that pharmaceuticals are able to pass to higher trophic levels through the food chain:

17

pharmaceuticals were found in water

8

pharmaceuticals were found in fish

1

pharmaceutical was found in birds feeding on the contaminated fish (19).

(15) Jobling S et al. 1998.

(19) Lazarus RS et al. 2014.

Enrofloxacin, Ciprofloxacin

Antibiotics

Cyanobacterium (*Anabaena flosaquae*)

Duckweed (*Lemna minor*)

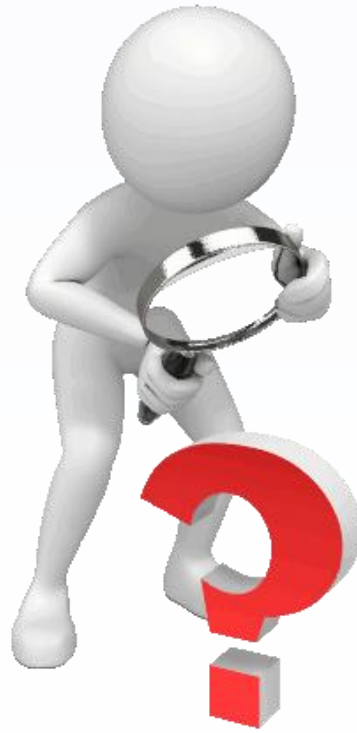
Growth inhibition

Laboratory

Ebert et al. 2011



Limitations & unknowns



Risks for human health?
Emergence and spread
of antimicrobial
resistance via the
environment?

Limited capacity and
access for ERA
datasets; to be taken
into account for the
overall benefit/risk when
applying for a MA

GMP do not address
discharges of APIs into
the environment
APIs are not considered
polluting substances in
the IED

WWT technologies unable to completely remove pharmaceuticals; pharmaceuticals in irrigation water, sludge or manure not addressed in the policy measures

No EU-wide targeted monitoring of pharmaceuticals in surface and ground waters

Lack of awareness among health professionals and the general public on the environmental aspects (education on the proper consumption and procurement practices)

Detailed information regarding the implementation and efficiency of collection schemes throughout Europe highly scattered and deficient

To Act or Not to Act?



Health effects of chronic exposure to pharmaceuticals and child exposure have not been studied.



Between what has been scientifically proven to be problematic, what emerging research suggests is problematic and taking the precautionary principle approach, how, where and when should we act?



Zero emissions and benign by design drugs => What happens with pharmaceuticals that are already present into the environment?

Thank you!

