

Greening procurement – WHO project on sustainable procurement of pharmaceuticals

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Emission of pharmaceutical residues to the environment during manufacture and/or normal use may exert a risk for negative environmental effects, and may also have a negative impact on human health due to the increased risk for development of antibiotic resistance in cases of large emissions. Six UN institutions (UNDP, UNEP, UNFPA, UNICEF, UNOPS, and WHO) are currently planning a project to improve the sustainability of their respective health care projects, and thereby to diminish possible future negative environmental effects of pharmaceuticals. Two different approaches to reach the target are planned: (i) to develop and introduce technical guidelines on sustainable procurement of health care products including pharmaceuticals, thereby creating an incentive for manufacturers to strive towards production of more “green” products, and (ii) to include protection against emissions of environmentally hazardous pharmaceuticals or their by-products in the GMP (Good Manufacturing Practice) mandatory to all pharma industry in their production of pharmaceuticals. The project is planned to last for 4-5 years, including fund raising, development of working plan and technical guidelines, contacts with producers, analysis of possible methods to stimulate “green” production of drugs, and training of procurement staff to handle the guidelines efficiently.

External institutions collaborating in this project are NHS-UK who recently developed a guideline for assessment of carbon footprint of pharmaceuticals in a lifecycle perspective, as well as the Swedish MPA and Stockholm County Council, who have a ten year experience of classifying pharmaceuticals on an environmental risk and hazard basis.



Science-Policy Event: Pharmaceuticals in the Environment:
Current scientific developments and policy responses
Brussels, November 21, 2013

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Environmental impact of the health sector:

Greenhouse gas emissions:

- In the US the health-care sector accounts for 8% of total GHG emissions.
- In the UK NHS carbon footprint calculations estimated that almost 60 % of emissions were due to the procurement of supplies, of which the largest component was pharmaceuticals.

Chemical emissions:

- In addition to greenhouse gas emissions, the health sector causes environmental harm through manufacturing, use and disposal of products procured. These negative impacts include: hazardous medications, chemicals, radiation, environmental and infectious hazards, air and water pollution, and risk from inappropriate health care waste disposal and incineration practices

The WHO project

Overall objective

To reduce the environmental burden caused by the health sector by focusing on procurement as a strategic tool.

Method

To influence UN agency procurement practitioners, suppliers and funding entities to adopt and apply less environmentally harmful procurement practices, manufacturing processes and products.



Project start: May 2012

Estimated end: 2018

Joint Programme Steering Committee (JSC)

Secretariat of the informal Interagency Task Team for Sustainable Procurement in the Health Sector (iIATT-SPHS)

Resource mobilization efforts will be coordinated by the secretariat of the iIATT-SPHS in close collaboration with the participating UN Agencies.

- UNDP (CO) United Nations Development Programme (Country Office)
- UNEP United Nations Environment Programme
- UNFPA United Nations Population Fund
- UNICEF United Nations Children's Fund
- UNOPS United Nations Office for Project Services
- WHO World Health Organization



Collaborating partners:

National Health Services (NHS) in UK

Medical Products Agency (MPA), and
Stockholm County Council (SCC) in Sweden

What to be done?

A formal guidance process using the WHO scientific evidence based approach will be developed to cover

(1) Green procurement of pharmaceuticals and health products,

as well as

(2) The Good Manufacturing Practices (GMP) certification to include environmental factors.

Persistence: The substance is

- *degraded* in the environment
- *slowly degraded* in the environment
- *potentially persistent*

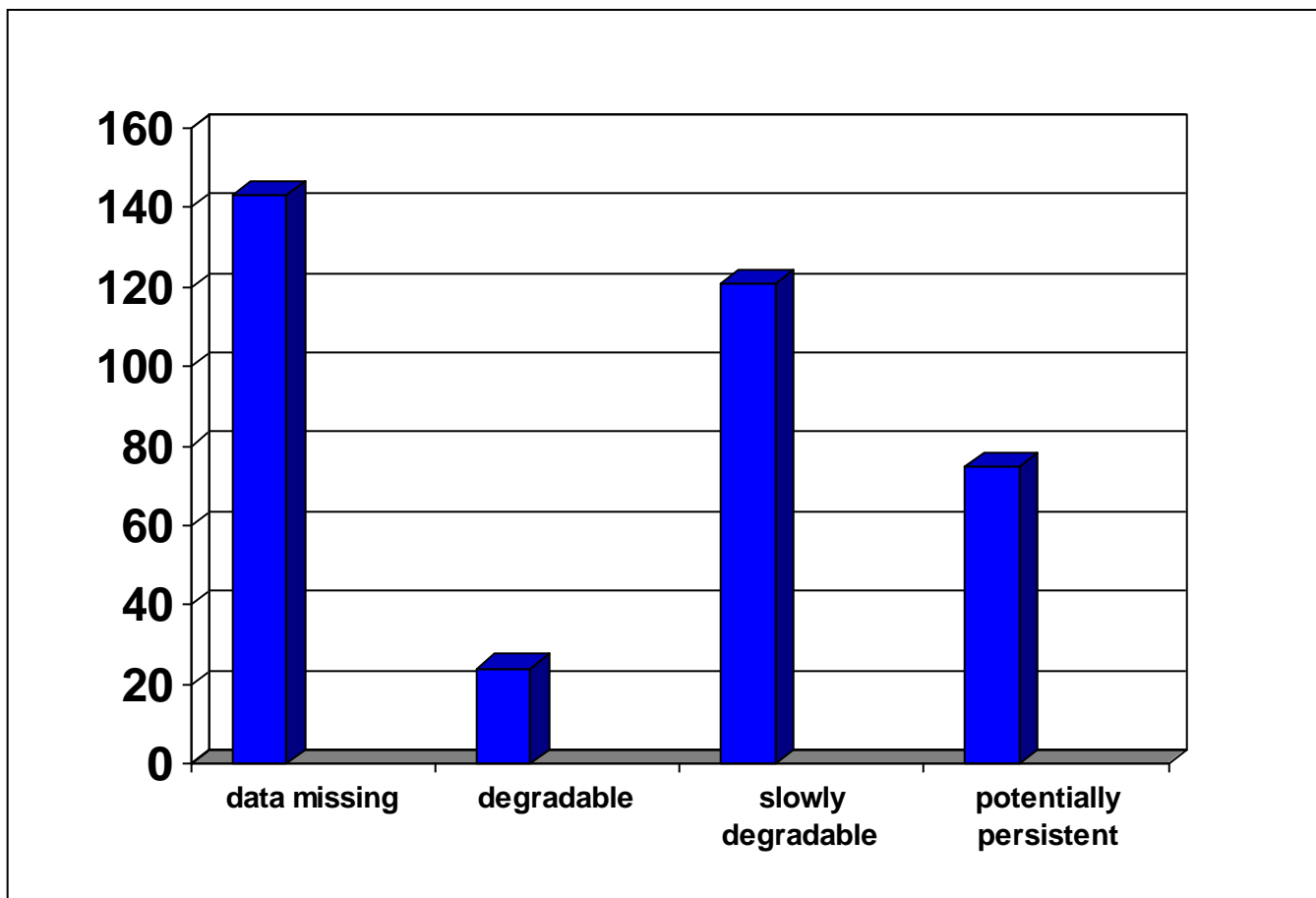
Bioaccumulation

No significant bioaccumulation potential
Potential to bioaccumulation in aquatic organisms

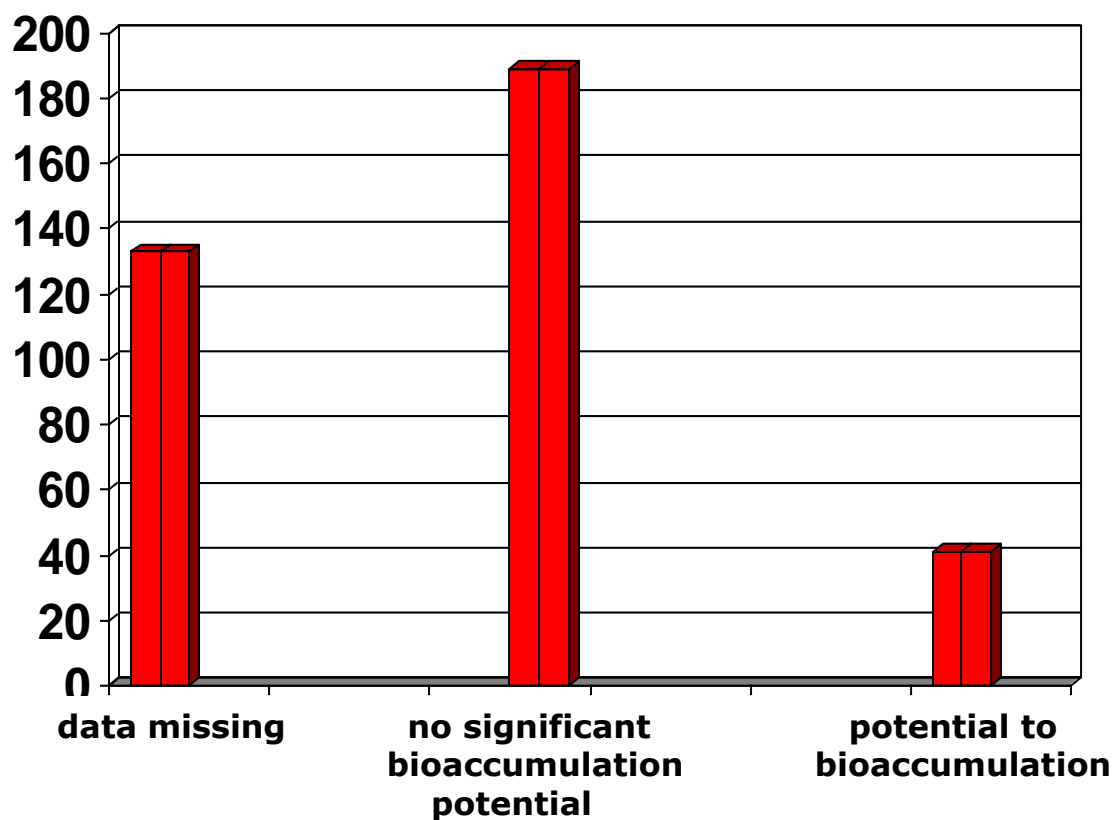
Toxicity (eco) Aquatic toxicity is

- *low* (LC/EC/IC₅₀ > 100 mg/l)
- *moderate* (LC/EC/IC₅₀ 10-100 mg/l)
- *high* (LC/EC/IC₅₀ 1-10 mg/l)
- *very high* (LC/EC/IC₅₀ < 1 mg/l)

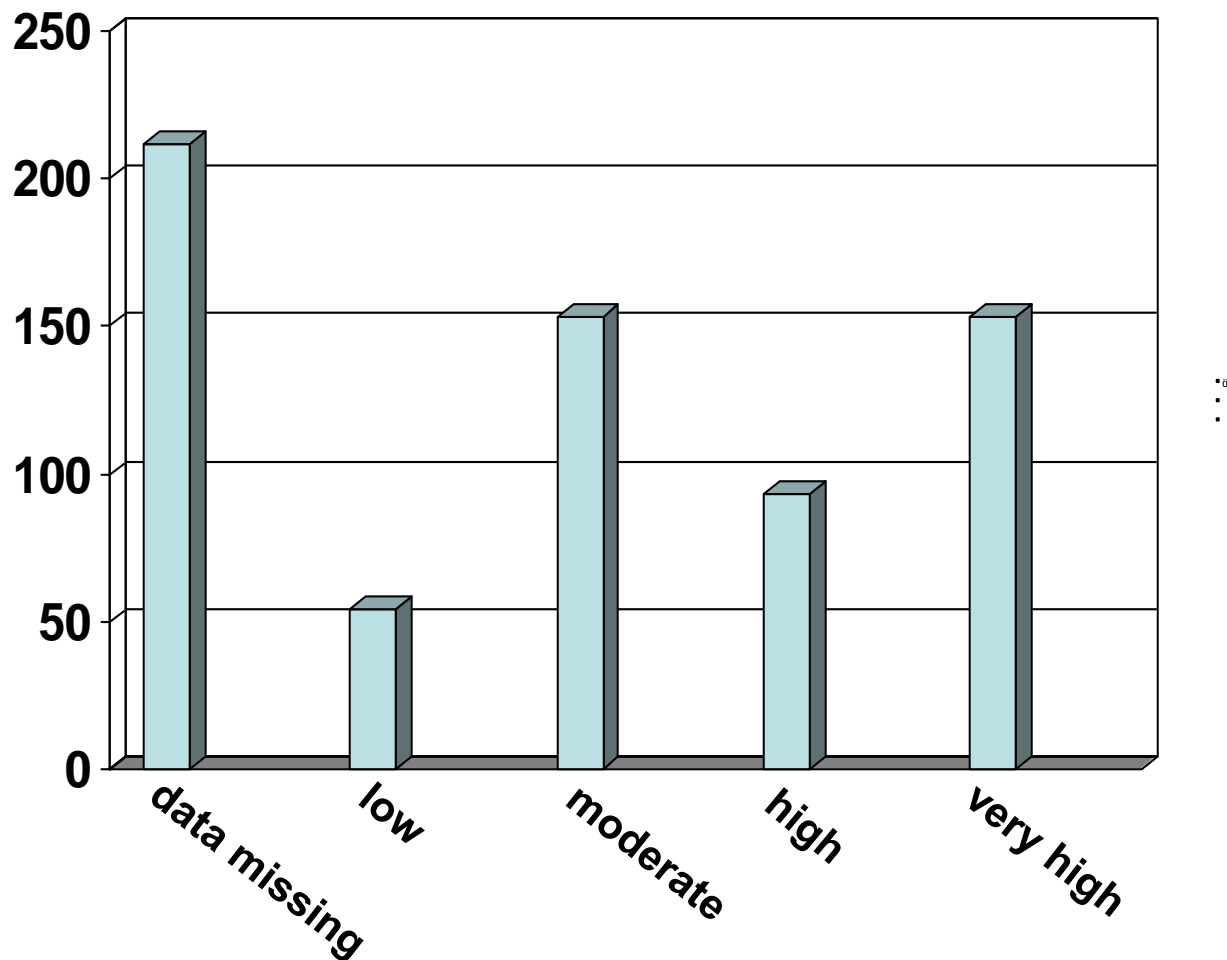
Outcome of the hazard estimation: persistence



Outcome of the hazard estimation: bioaccumulation



Outcome of the hazard estimation: ecotoxicity





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Thank you