

April 2022 Updates

# Coastal Pollution Toolbox Newsletter

Welcome to the first *Coastal Pollution Toolbox* (CPT)-Newsletter! We are happy to provide you with the latest updates of our objective to develop a toolbox that supports action and optimisation of scientific concepts to investigate pollution in the land-to-sea continuum.

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## Updates

The new website is available via

<https://www.coastalpollutiontoolbox.org>

## Network and Partners

By April 2022 over 143 scientists, planners, industry partners and media representatives interested in pollution from 30 countries have stated interest to be informed about updates.

## The Coastal Pollution Toolbox in a nutshell

Interdisciplinary team of environmental scientists using state-of-the-art methods and infrastructure  
@Hereon and within the Helmholtz Association

Co-design, co-development & climate change specialists  
@Climate Service Center Germany (GERICS)

IT and Data Management specialists and infrastructure  
@Helmholtz Coastal Data Center (HCDC)

A growing global network of earth system scientists focussing on chemical pollution  
(04/22: 143 registered user in 30 countries)



Since 2021 the CPT is an affiliated project of *Future Earth Coasts* under the international *Future Earth* initiative *Research. Innovation. Sustainability.*

futurearth coasts

## Latest Tools

Recently available **Synthesis Tools** provide interested scientists and users with expert knowledge. These tools address challenges of global environmental change as well as of societal concern. They are information-rich products based on consolidated data of different types and origin.

Selection of *Synthesis Tools*:

**Microplastic Compendium (MPC)**

Please access via

<https://microplastic-compendium.eu>



The MPC serves as digital source of information and platform for different aspects of microplastic pollution in coastal areas and in the sea.


**Microplastic Compendium**

The microplastic compendium (MPC) serves as digital source of information and platform on different aspects of microplastic pollution. It targets various interest groups, both interested readers without a scientific background and people with relevant scientific questions. Most importantly, users can find aggregated information on various aspects of this highly relevant environmental problem. Extensive information was gathered on the scope and consequences of microplastic pollution, as well as possible measures and solutions tackling the issue from a policy and industry perspective. For early starters in the scientific field, the most relevant reviews are linked. Additionally, recommendations for suitable chemical-analytical workflows are included. The MPC does not claim to be complete. Content selection of reviews and recommendations are based on the authors' point of view and on personal expert knowledge. The contents are therefore subjective. They are largely extracted from the theses by Fadi El Gareb (M.Sc.), Jeannette Hansen (B.Sc.) and Dr. Lars Hildebrandt (M.Sc. and PhD). Experts from Hereon, the Helmholtz Centre for Environmental Research (UFZ), the Alfred Wegener Institute (AWI) and the University of Plymouth have kindly contributed special articles. Special thanks to Hatem Takyar (M.Sc.) for the development and maintenance of the portal.


The MPC has been developed in the context and is part of the Coastal Pollution Toolbox, a knowledge hub, digital working environment and tool set to study contaminant, nutrient and carbon dynamics in temperate and polar coastal zones.


[Contact](#)   [Just another MP web-site ?](#)

 Explore the Different Environments

 Plastic Pollution: A Global Problem

 Definition And Pathways



## Synthesis

### Contaminants in Polar Regions

Please access via

<https://www.coastalpollutiontoolbox.org/104992/index.php/en>

This report is a synthesis of current knowledge, research needs as well as policy implications to tackle the issue of Legacy and Emerging Contaminants in Polar Regions.

**Act now – Legacy and Emerging Contaminants in Polar Regions**

**WORKSHOP REPORT**



*Online Expert Workshop  
 January 25<sup>th</sup> – 26<sup>th</sup> 2022*

Helmholtz-Zentrum Hereon, Geesthacht, Germany

## Reviews

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### Arctic Mercury Cycling

In this review A. Dastoor, H. Angot and J. Bieser et al. (2022) present a comprehensive assessment of the present-day total Hg mass balance in Arctic, published in *Nature Reviews Earth and Environment*.

Please access via

<https://www.coastalpollutiontoolbox.org/105433/index.php.en>

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### Organophosphate esters (OPEs) in the marine environment

This review by Z. Xie et al. (2022) (published in *Nature Reviews Earth and Environment*) is a synthesis of current knowledge on the transport, biogeochemistry and effects of organophosphate esters (OPEs) in the marine environment.

Please access via

<https://www.coastalpollutiontoolbox.org/105433/index.php.en>

Please access all available *Synthesis Tools* via

<https://www.coastalpollutiontoolbox.org/104531/index.php.en>

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With a selection of **Science Tools** we provide expert users with information on new methods, approaches or indicators for baseline assessments or for the re-evaluation of complex environmental problems in the land-to-sea continuum.

Selection of *Science Tools*:

- Accumulated watershed sediments as pollution memories: A tool to identify peak pollution periods in deposited sediment layers to support industrial regulation
- A tool based around a novel combination of methods reveals that tropical seagrasses are not a “miracle solution” to climate change

- Sustainable energy transitions: an approach to examine stakeholder perception in supporting large off-shore infrastructure
- Application of emission modeling tools to assess air quality improvements during Corona lockdown
- Extreme flood events: A drift-based tool enabling a synoptic assessment of spatially distributed observations
- In support of new SOPs - a new method for the assessment and analysis of microplastics developed

Please access all available *Science Tools* via

<https://www.coastalpollutiontoolbox.org/090472/index.php.en>

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## What is next?

More content within existing and newly developed Compendiums...

More *Science Tools* developed from peer-reviewed research...

A more active involvement on...

LinkedIn: <https://www.linkedin.com/company/coastal-pollution-toolbox>

Twitter: <https://twitter.com/CoastalToolbox>

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## Contacts

Ralf Ebinghaus, Marcus Lange

Helmholtz-Zentrum Hereon, Institute of Coastal Environmental Chemistry

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[coastalpollutiontoolbox@hereon.de](mailto:coastalpollutiontoolbox@hereon.de)