

Welcome

Webinar: Analysis of alternatives and tools to support substitution of biocides

26 April 2023

Adam Elwan
Communications
European Chemicals Agency



What you can expect today

- Learn about tools, guidance and services to support you in successful substitution
- Get advice on how to analyse alternatives and what challenges to expect
- Get answers to your questions



Live Q&A

- Join Q&A at: [slido.com](https://www.slido.com)
Event code:
- Send questions from 15:00 to 16:30 (EEST, GMT +3)
- Question for a specific speaker? Indicate when sending your question
- Only questions within scope
- Question not answered? Refer to published Q&A

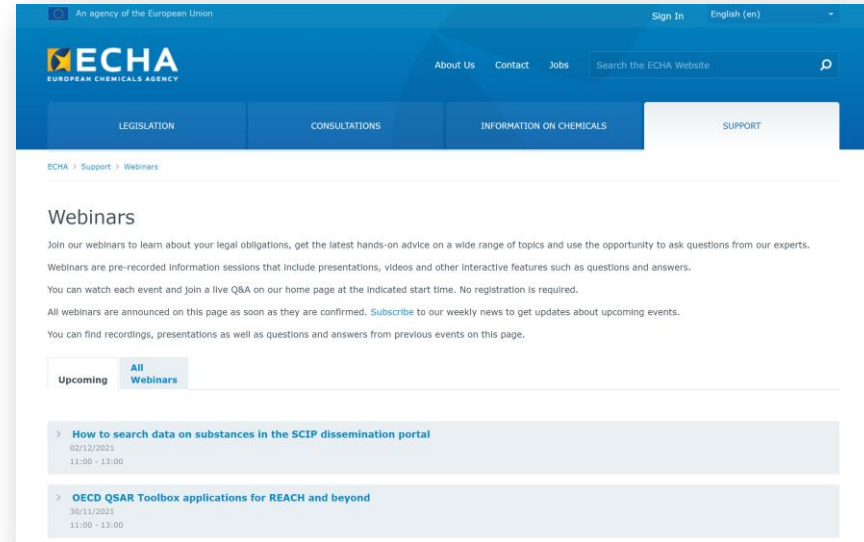
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Material available

- Video recording
- Presentations
- Q&A (soon after the event)



The screenshot shows the ECHA website's 'Webinars' page. The header includes the ECHA logo, navigation links for 'About Us', 'Contact', and 'Jobs', and a search bar. Below the header, there are tabs for 'LEGISLATION', 'CONSULTATIONS', 'INFORMATION ON CHEMICALS', and 'SUPPORT'. The main content area is titled 'Webinars' and contains introductory text about the service, including a link to subscribe to weekly news. Below the text, there are two tabs: 'Upcoming' and 'All Webinars'. Two webinar events are listed:

Topic	Date	Time
How to search data on substances in the SCIP dissemination portal	02/12/2021	11:00 - 13:00
OECD QSAR Toolbox applications for REACH and beyond	30/11/2021	11:00 - 13:00

echa.europa.eu/webinars

Programme



Time	Topic	Speaker
15.00	Introduction	Adam Elwan, ECHA
15.05	Guidance on analysis of alternatives to biocidal active substances and online training	Denis Mottet, ECHA
15.10	Subsport: database on alternatives and case studies	Michaela Clever, German Federal Institute for Occupational Safety and Health (BAuA)
15.20	Non-chemical alternatives: importance and challenges with their assessment	Stefanie Wieck, German Environment Agency (UBA)
15:30	Field testing of alternatives to biocidal antifouling paints: practical support of a Member State	Bob Vermeent, Dutch Ministry of Infrastructure and Water Management
15:40	ChemSec's Marketplace: a platform to find and offer safer alternatives	Jonatan Kleimark, International Chemical Secretariat (ChemSec)
15:50	Conclusions	
15:55-16:30	Live Q&A	

Thank you

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[EUchemicals](https://www.youtube.com/EUchemicals)

Guidance on analysis of alternatives to biocidal active substances: a reference framework

Webinar on analysis of alternatives and tools to support substitution of biocides

26 April 2023

Denis Mottet
Scientific officer
European Chemicals Agency



Fostering substitution



- The substitution principle of the most hazardous substances well present in the BPR
"substances candidate for substitution"
(Art.10(1) of the BPR)
- Alternatives: key consideration for the derogation conditions under Art.5(2)
- Increasing focus and expectations on analysis of alternatives ("AoA")

New guidance

- New framework [guidance](#) and reporting [template](#) published in January 2023
- Main target audience: applicants of substances candidate for substitution (Art.10(1) of the BPR) and authorities
- [Implementation note](#):
 - “Exclusion” criteria: 1 March 2024
 - Not “exclusion” criteria: 1 March 2025



Search for information and get support



- Similar approach to AoA in REACH Application for Authorisation
- Challenges with biocidal active substances well known!

lack of knowledge on uses, potentially high number of uses, lack of information on alternatives, etc.

So, **prepare early** and search broadly for information

- In- and outside your supply chain
- Scientific/technical literature
- Specialised consultants
- Dedicated websites
- Importance of non-chemical alternatives!

Prepare and submit

- Prepare an analysis of alternatives according to the guidance and template
- Justify well your analysis!
- Submit it according to the implementation timeline
- ECHA will publish the non-confidential version as part of the third parties' consultations (Art.10(3) of the BPR)
- Participation of stakeholders in the consultations is key!

Introductory training on analysis of alternatives to hazardous substances

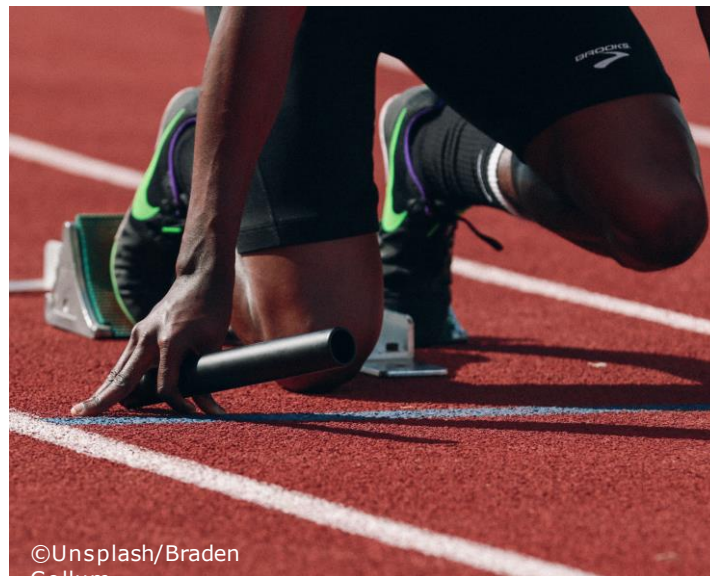
- Introduction – Makes the case for informed “substitution thinking” and introduces the training | [Video recording](#)
- S1: Scoping the assessment | [Video recording](#)
- S2: Identifying and screening alternatives | [Video recording](#)
- S3: Hazard and exposure | [Video recording](#)
- S4: Cost and technical performance | [Video recording](#)
- S5: Making and implementing decisions | [Video recording](#)

Available on Youtube and via [e-learning platform](#)

→ Check also [ECHA's substitution webpages!](#)

Key messages

- Increased focus on alternatives
- New guidance available
- Start early your analysis of alternatives
- Search broadly for information
- Non-confidential version published



Thank you

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[EUchemicals](https://www.youtube.com/EUchemicals)

SUBSPORTplus: Database on Alternatives and Case Studies

26. April 2023, ECHA Webinar

Dr. Michaela Clever

Group Hazardous Substances in OSH, Coordination CLP

Federal Institute of Occupational Safety and Health (BAuA)

An Information Portal and Tool

SUBSPORTplus as a tool

- To collect and disseminate information on substitution, e.g.
 - Case Stories
- To assist with substitution
 - Methods and Tools
- To build a network
- To support initiatives regarding substitution



<https://www.subsportplus.eu/>

Key Features of the Portal

REGULATION



EU,
International,
USA,
China

SUBSTANCES



Criteria for
substitution
candidates

**Database
„list of lists“**

36 lists
> 37.700
entries

CASES



Methods
Case studies
on groups
**Database of
case stories**

PROCESS



6-Steps to
Substitution
Help
Instruments

GOOD PRACTICE



Guidelines
for safe
handling



ROADMAP
N CARCINOGENS

CASES



Database of Case Stories

Examples from Industry **Studies & Reports** **Literature**

SUBSPORTplus-Database for Case Stories (~460)

Search for
Search in Case Story database

SEARCH

Enter EC-or CAS-Number, Substance Name

Sector	Function	Process
<input type="checkbox"/> Agriculture, forestry, fishery (11)	<input type="checkbox"/> Adhesion promotor (4)	<input type="checkbox"/> Roller application or brushing (2)
<input type="checkbox"/> Manufacture of rubber products (56)	<input type="checkbox"/> Adsorbent (1)	<input type="checkbox"/> Non industrial spraying (2)
<input type="checkbox"/> Manufacture of plastics products, including compounding and conversion (56)	<input type="checkbox"/> Binder (3)	<input type="checkbox"/> Treatment of articles by dipping and pouring (5)

+ SHOW MORE

+ SHOW MORE

Short Summaries + Title

Filter/Search Criteria

- Bilingual:
~380 in EN, ~ 80 in DE
- 3 new case stories in 2020
- 8 new case stories in 2021
- 2 new case stories in 2022

✓ SUBSPORTplus methodology

CASES



Information on Alternatives

Case Story database

- Alternatives?

SUBSPORTplus
methodology on case stories

- Relevant criteria to choose alternatives?

Case studies for selected
substances

- Alternative assessment on groups of substances
- No hit? More information on alternatives?

CASES



SUBSPORTplus- Methodology

CMR-Substances:
carcinogenic, mutagenic,
reprotoxic substances

(v)P, (v)B, T:
(very) persistent, (very)
bioaccumulative, toxic

Endocrine
Disruptors

Neurotoxic
Substances

Sensitizing
Substances

- Exclusion criteria for alternatives

CASES



Case Stories on Biocides

Search results 1 to 10 from a total of 456



Sector	Function	Process
Agriculture, forestry, fishery (6)	Abrasive (2)	Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions. (6)
Manufacture of rubber products (50)	Adhesion promoter (5)	Roller application or brushing (24)
Manufacture of plastics products, including compounding and conversion (54)	Adsorbent (4)	Non industrial spraying (21)
Manufacture of other non-metallic mineral products, e.g. plasters, cement (6)	Aerating and deaerating agents (1)	Treatment of articles by dipping and pouring (32)
Manufacture of basic metals, including alloys (9)	Antiadhesive (2)	Tableting, compression, extrusion, pelletisation, granulation (1)
Manufacture of fabricated metal products, except machinery and equipment (35)	Antifreeze agent (1)	Use as laboratory reagen (6)
Manufacture of computer, electronic and optical products, electrical equipment (28)	Antioxidant (2)	Use of fuels (1)
General manufacturing, e.g. machinery, electrical equipment, metal products, etc. (10)	Binder (3)	Lubrication at high energy conditions in metal forming operations (3)
	Biocide (20)	
	Bleaching agent (1)	
	Chelating agent (3)	
	Cleaning agent (87)	
	Conductive agent (1)	
	Corrosion inhibitor (4)	

https://www.subsportplus.eu/subsportplus/EN/Cases/Case-story-database/case-story-database_node.html

CASES



Case Stories on Biocides – e.g.

Function

- Biocide (20)
- Cleaning agent (1)
- Flame retardant (1)

+ SHOW MORE

Title (first 5 examples)

Substitution of allergenic preservatives: methylisothiazolinone and methylchloroisothiazolinone

Substitution of Octamethylcyclotetrasiloxane (endocrine disruptor and toxic for reproduction) used in citrus waxing

Substitution of glutaraldehyde with a solution of peracetic acid and hydrogen peroxide as a disinfectant of medical equipment.

Reduction of chlorine for disinfecting swimming pools

Carbon dioxide as an alternative to sterilization using ethylene oxide

...

https://www.subsportplus.eu/subsportplus/EN/Cases/Case-story-database/case-story-database_node.html

CASES



Case Story: Type of information

Information on substitution candidate

- Sector
- Function
- Process
- Product category
- Application

Substance identifiers

- Classification
- CAS
- EC

Description of the case

- Abstract
- Reason, why?
- Pros and Cons
- Hazard Assessment
- State of implementation
- ...

References

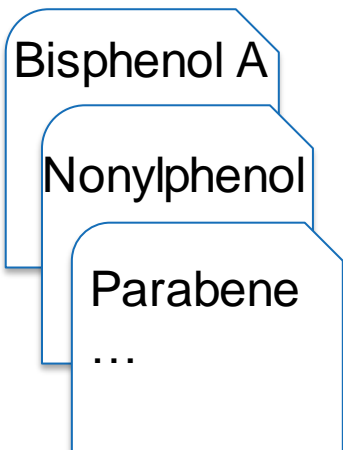
- Supplier
- Producer
- Literature

CASES



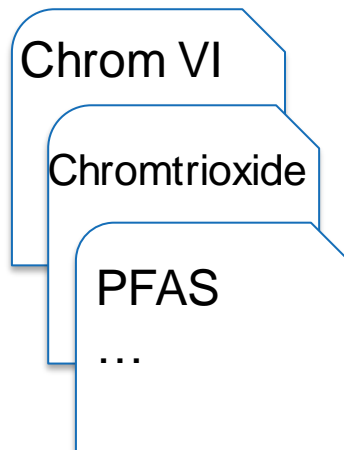
Case Studies, Reports & more

Case studies



+

Reports



+

More information on alternatives, e.g.



<https://marketplace.chemsec.org>



<http://www.oecd-saatoolbox.org/Home/CaseStudies>

https://www.subsportplus.eu/subsportplus/EN/Cases/Case-studies-for-selected-substances/case-studies-for-selected-substances_node.html

CASES



BAuA-Reports & Workshops

Report



Survey on alternatives for
in-can preservatives for varnishes,
paints and adhesives

chromgruen

Planungs- und Beratungs- GmbH & Co. KG
Environment - Software - Occupational Safety

A. Müller, V. Schmahl, S. Gschrei:
1. Edition. Dortmund: Bundesanstalt für
Arbeitsschutz und
Arbeitsmedizin 2020. pages 57, PDF
file, DOI: 10.21934/baua:report20200811

https://www.baua.de/EN/Service/Publications/Report/Gd103.pdf?__blob=publicationFile&v=1

Workshop

Webinar (in German) with stakeholders, 25.02.2021

<https://www.baua.de/DE/Angebote/Veranstaltungen/Dokumentationen/Gefahrstoffe/Topfkonservierer.html>

CASES



Outlook

- ✓ Databases are continuously updated
- ✓ Addition of new cases from network, survey/studies, literature
- ✓ Substance alternatives, technical alternatives, functional alternatives
- ✓ Future: Integrate new concepts of Safe and Sustainable by Design

Thank you for your attention! Questions?

Visit: <http://www.subsportplus.eu/>

Contact: SUBSPORTplus@buaa.bund.de

Contribute your case story and inspire others!

:subsportplus
Substitution Support Portal



Für Mensch & Umwelt

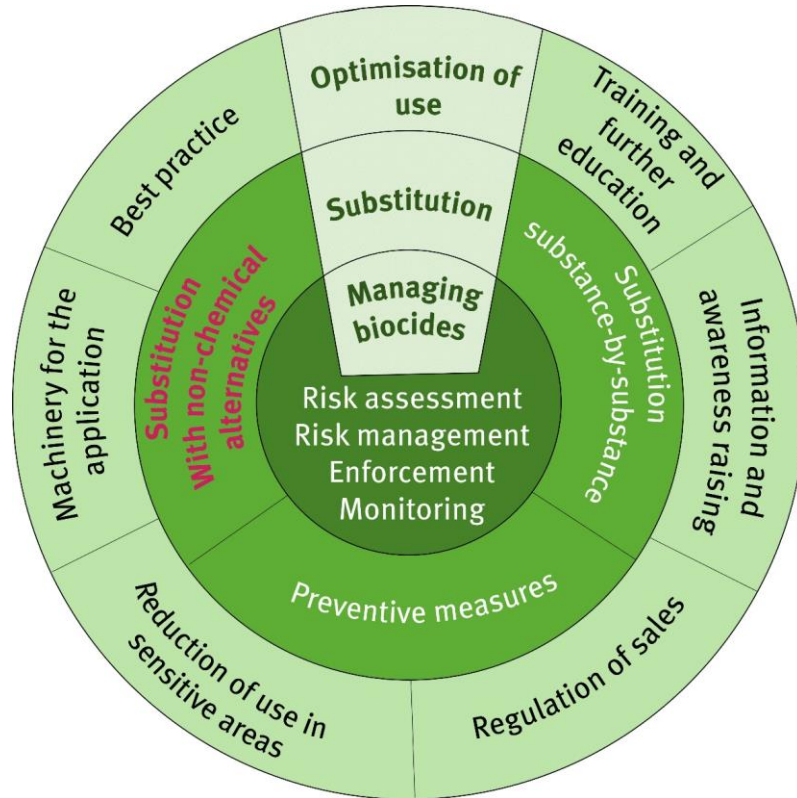
Umwelt 
Bundesamt

Analysis of alternatives and tools to support substitution of biocides

Non-chemical alternatives: importance and challenges with their assessment

Stefanie Wieck
Unit IV 1.2 Biocides

Sustainable Control of Harmful Organisms in the 21st Century

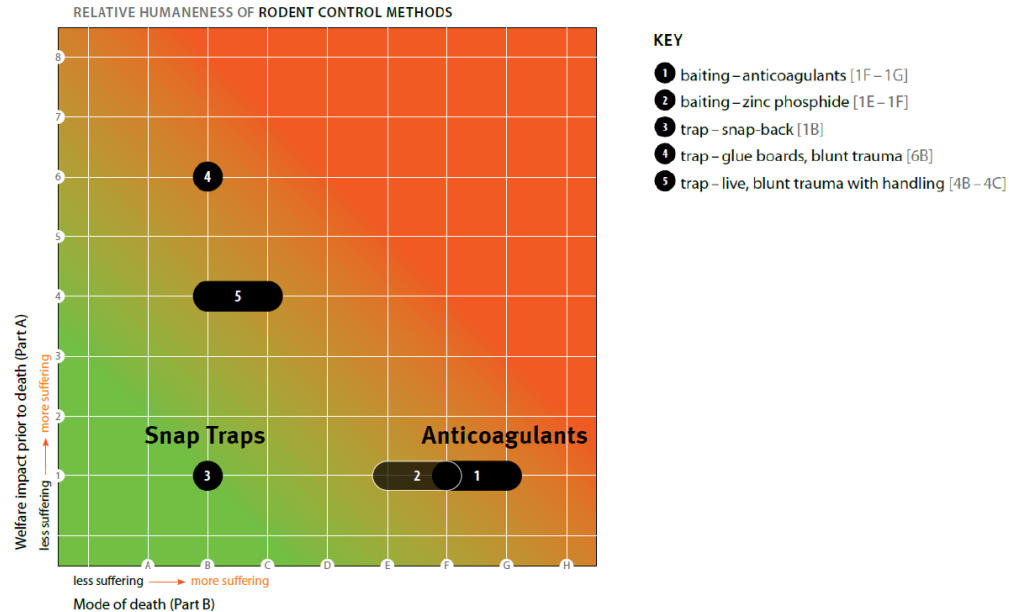


SCOTTY projects

- Efficacy testing /assessment of alternatives
- New management concepts for harmful organisms
- Testing of devices for the application of biocides
- Chemical alternatives
- Stakeholder involvement and networking
- Public relations

Mismatch between biocidal products and alternatives

Independent evaluation of alternatives is missing – efficacy, humaneness and effects on non-target organisms



Sharp T, Saunders G. (2011) A model for assessing the relative humaneness of pest animal control methods (2nd ed.). Australian Government Department of Agriculture, Fisheries and Forestry, Canberra, ACT.

Further development of testing of alternatives

- Development for efficacy tests for rodent snap traps (NoCheRo)
 - <https://www.umweltbundesamt.de/en/topics/chemicals/biocides/non-chemical-alternatives-for-rodent-control>
- Testing of non-chemical alternatives (rodent traps) for listing according to §18 German Infection Protection Act
- Development of efficacy test for thermal control of surface fouling organisms (starting in 2023)
- Establishment of eco-labels (Blue Angel) for non-biocidal alternatives
 - Eco-label “Blue Angel” on low-impact pest control
 - Eco-label “Blue Angel” on thermal indoor pest control
 - Eco-label “Blue Angel” on thermal pest control of wood-damaging insects
 - Eco-label “Blue Angel” for façade paints without biocidal film protection
 - Eco-label “Blue Angel” for biocide-free anti-fouling systems

Information offers

- Biocidal products are easy to find in databases – but where to find information on alternatives?
- **Problem:** Authorities cannot recommend products without transparent criteria
- **Workaround:** Establishment of those criteria (e.g. NoCheRo-guidance¹ and embedding in existing structures (German Infection Protection Act and Blue Angel)
- Providing information on existing certified alternatives on **SCOTTY-homepage**
 - In English for consideration during assessment of alternatives during comparative assessments
 - In German for substitution assessment according to Ordinance on Hazardous Substances (GefahrstoffV)

¹ Guidance available online: https://www.umweltbundesamt.de/sites/default/files/medien/5750/publikationen/2021-05-06_texte_74-2021_nochero_0.pdf;

BPC opinion on guidance available online:

https://echa.europa.eu/documents/10162/3443005/art.75_rodent_traps_final_bpc_opinion_en.pdf/d6779f2c-b1b0-e7e8-8a68-d27e9e2b73b2?t=1640100678738

Information offers


Umwelt Bundesamt

The UBA Topics Press Publications Data

High contrast Service Disclaimer and privacy policy

Home > Topics > Chemicals > Biocides > Sustainable Control of Harmful Organisms

Sustainable Control of Harmful Organisms in the 21st Century



Sustainable Control of Harmful Organisms in the Twenty-First Century (SCOTTY)
Source: Umweltbundesamt

Topics

- Chemicals
- Biocides
- Sustainable Control of Harmful Organisms**
- Projects

International information offers

- Non-biocidal substitution options for curative wood preservatives
- Non-biocidal alternatives as substitution options for rodenticide
- Non-biocidal alternatives as substitutes for insecticides
- Non-biocidal substitution for biocidal antifouling coatings

Themen

- Chemikalien
- Biozide
- Nachhaltiger Umgang mit Schadorganismen**
- Projekte

- Nicht-biozide Substitution von bekämpfenden Holzschutzmitteln
- Nicht-biozide Alternativen zur Substitution von Rodentiziden
- Nicht-biozide Alternativen zur Substitution von Insektiziden
- Nicht-biozide Substitution von bioziden Antifoulingbeschichtungen

<https://www.umweltbundesamt.de/en/topics/chemicals/biocides/sustainable-control-of-harmful-organisms-in-the>

Information offers

- Biocidal products are easy to find in databases – but where to find information on alternatives?
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 - In English for consideration during assessment of alternatives during comparative assessments
 - In German for substitution assessment according to Ordinance on Hazardous Substances (GefahrstoffV)
- Offers are limited by existence of certification schemes and will of producers to use these schemes
- Strengthened consideration of non-chemical/non-biocidal alternatives during substitution procedures might enhance interest of producers to develop innovative alternatives and to certify

Key messages

- Sustainable management of harmful organisms is **much more** than the use of non-chemical alternatives, but...
- ...non-chemical alternatives are an **important component** of it.
- Further spread of non-chemical alternatives is obstructed by **missing knowledge** on
 - their existence.
 - their efficacy.
 - their humanness. (Same holds true for biocidal products.)
 - their effects on non-target organisms.
- **Independent certification** of alternatives would improve the situation.

Thank you for your attention!

Dr. Stefanie Wieck

stefanie.wieck@uba.de

<https://www.umweltbundesamt.de/en/topics/chemicals/biocides/sustainable-control-of-harmful-organisms-in-the>



Ministerie van Infrastructuur
en Waterstaat



Field testing of alternatives to biocidal antifouling paints: the practical support of a Member State

Bob Vermeent

Dutch Ministry of Infrastructure and
Water Management



This presentation

1. Fieldtest alternative antifoulings
2. Alternative antifouling campaign
3. Evaluation: lessons learned





0. What is antifouling?

- › Paint films that act as release vehicles for the active substance(s) contained in the paints.
- › Creating a microlayer of biocide rich water at the paint surface
- › Deter the settlement and/or growth of fouling organisms



Jean-Pierre Bazard Jpbazard, CC BY-SA 3.0 <<https://creativecommons.org/licenses/by-sa/3.0/>>, via Wikimedia Commons



1. Fieldtest: background

- › Symposium, Rotterdam, 2018
- › Environmentally friendly antifouling
 - Lack of data regarding effectiveness
 - Obstacle public acceptance
 - Bias?
 - 'Doesn't work', 'costly', ...





1. Fieldtest: testing

- > Dutch Ministry: funding collaborative effort to test alternatives
- > Cooperation:
 - Marine Industry Association
 - Environmental communication organization: Milieu Centraal
 - Public-private partnership organization for water recreation





Methods

- › Engaged with suppliers
- › 12 tested products
 - 11 biocide free + 1 copper-free
- › Conventional products
- › Two test locations
- › Salt and freshwater





Results

- > Fresh water
 - Alternatives same performance as conventional biocide
- > Salt water
 - Some same performance
 - Easier to clean than conventional
- > Positive results → more awareness: campaign





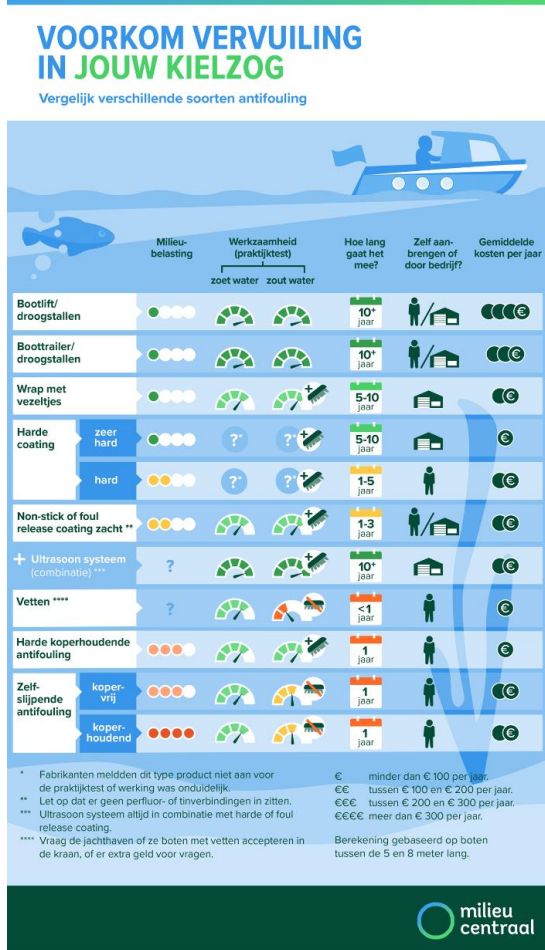
2. Alternative antifouling campaign

- › Collaborative effort
- › Communicating results of fieldtest
- › Continuous effort
 - Online and offline



2. Alternative antifouling campaign

- Infographic: overview antifouling products





3. Evaluation

- › Higher awareness of presence of alternatives
 - Especially young people

- › Little behavioral change
 - Opinions: costs, effectiveness and application

- › No significant increase sales alternatives





Role

- › Facilitating and enabling chain collaboration
- › Additional steering efforts required?





End

> Thank you.



chemsec

INTERNATIONAL CHEMICAL SECRETARIAT





CHEMSEC MARKETPLACE

An online B2B platform for safer alternatives



WHAT WE DO AT CHEMSEC

- Drive the political discussion on hazardous chemicals
- Challenge companies to improve their chemicals management
- Develop online tools to help companies switch to safer chemicals
- Inform investors about risks and opportunities in the chemical industry

CHEMSEC TOOLS

 chemsec
SIN LIST

 chemsec
CHEMSCORE

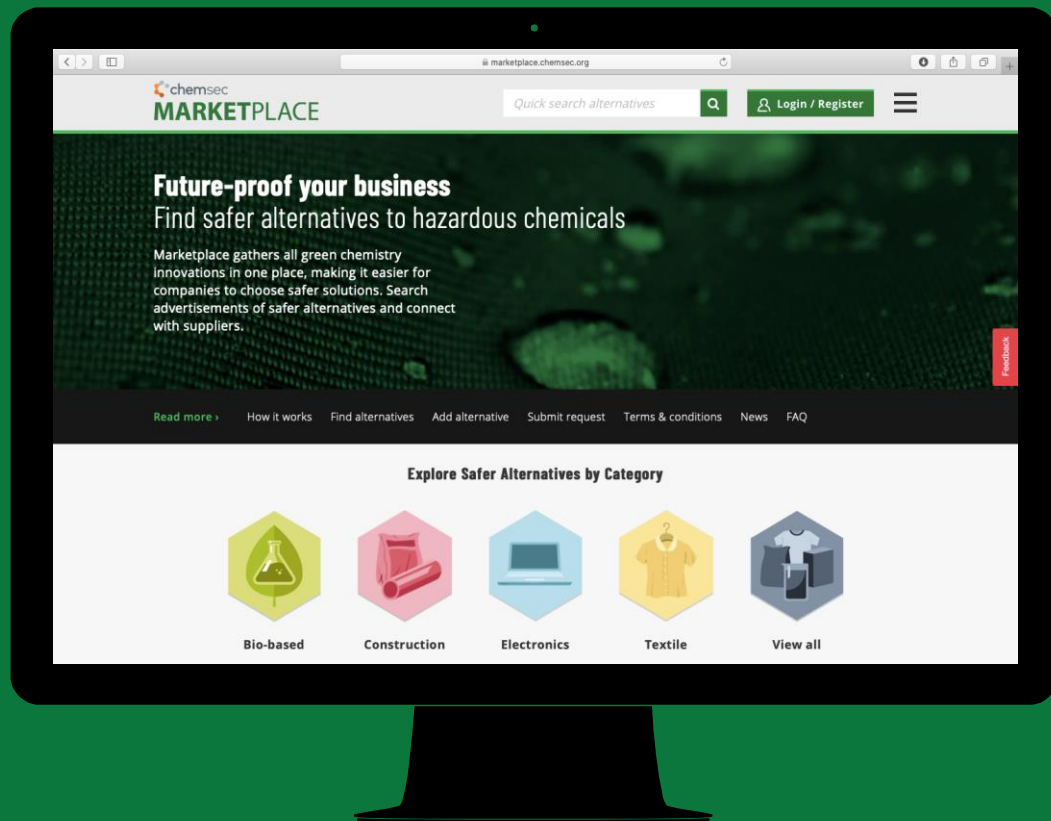
 chemsec
MARKETPLACE

 chemsec
PFASGUIDE



MARKETPLACE

**MARKETPLACE IS A
GLOBAL B2B
PLATFORM WHERE
YOU CAN FIND
SAFER
ALTERNATIVES TO
HAZARDOUS
CHEMICALS.**



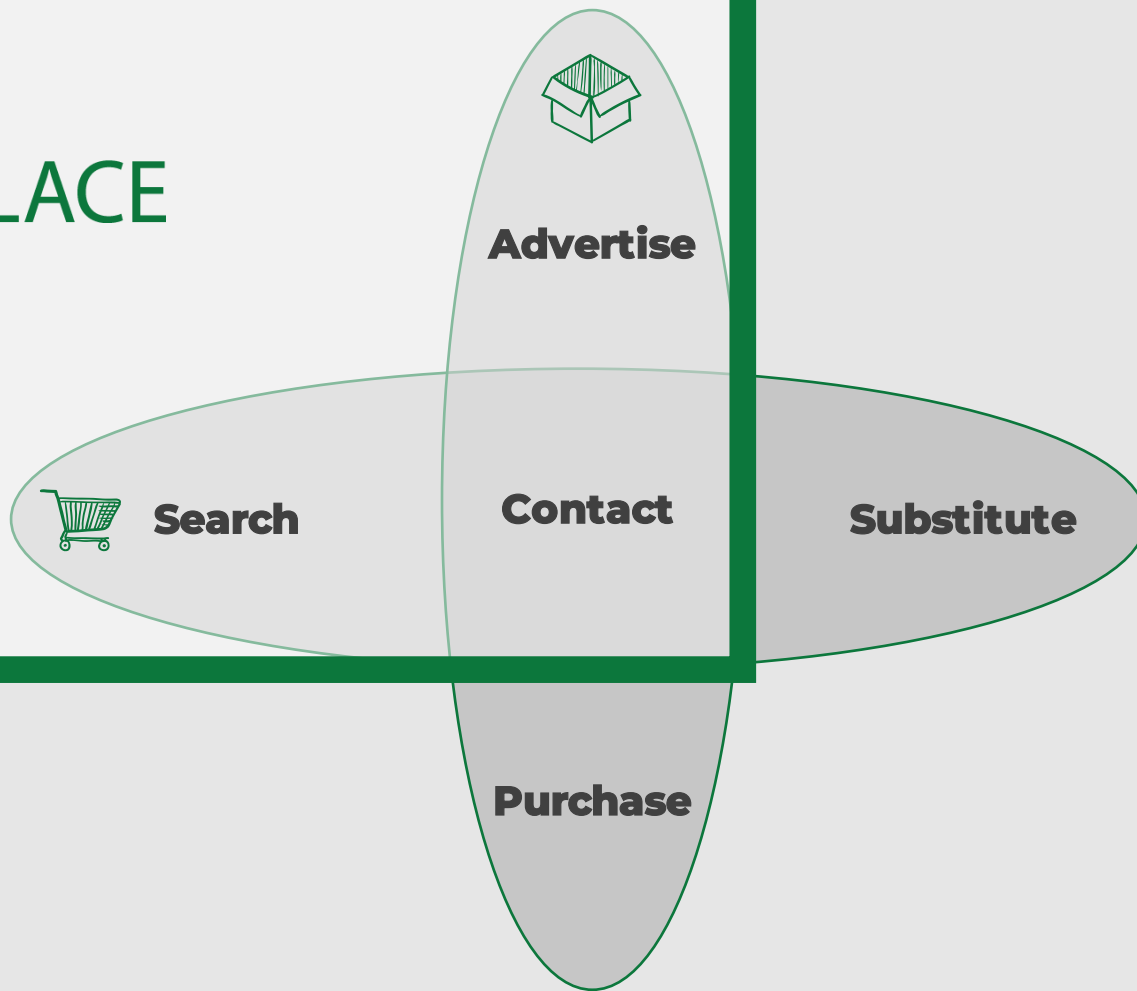


AIM AND VISION

- Increase availability of alternatives
- Provide access to alternative providers
 - Direct connection on the site
- Facilitate substitution
 - Understand availability and viability of potential alternatives



MARKETPLACE



Buyer



Supplier



SAFER ALTERNATIVES?

Any supplier offering a solution that can replace or remove hazardous chemicals

Marketplace welcomes:

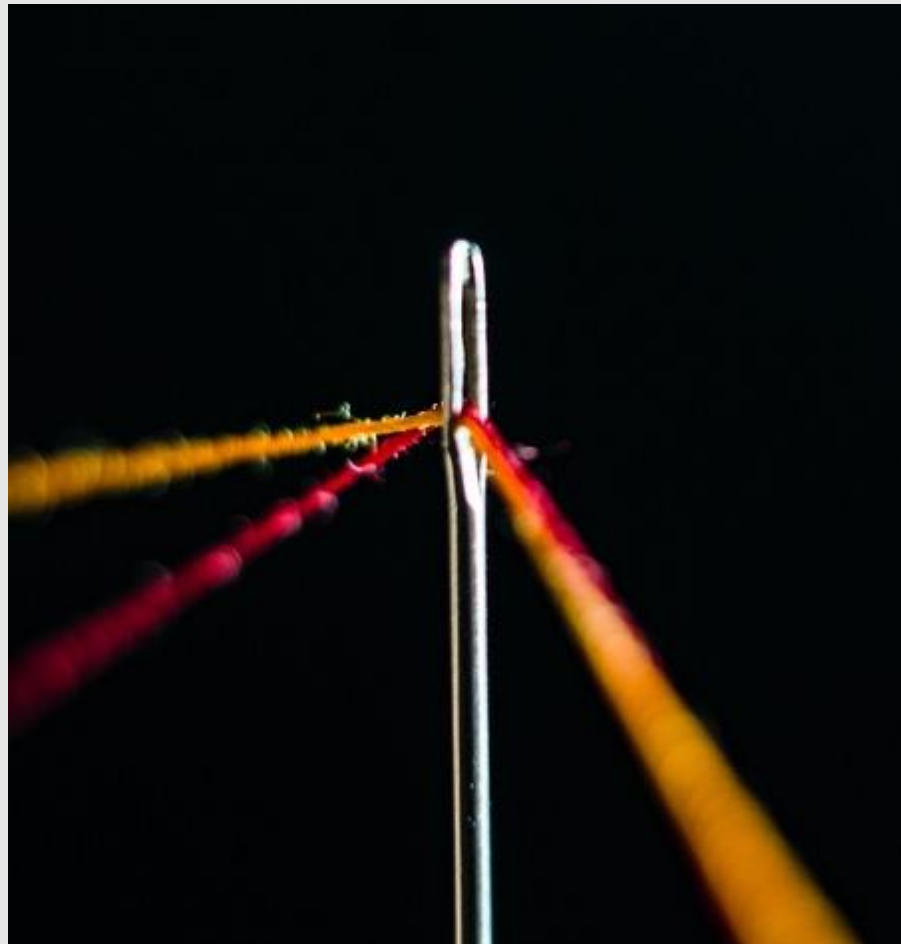
- Drop-in substitutes
- Technological solutions
- New processes and materials
- Bio-based materials





MARKETPLACE CRITERIA

- No substances on the REACH Candidate list
- No substances on the SIN List
- No substances with CMR properties
- No substances fulfilling the PBT/vPvB or PMT criteria in REACH
- No EDCs

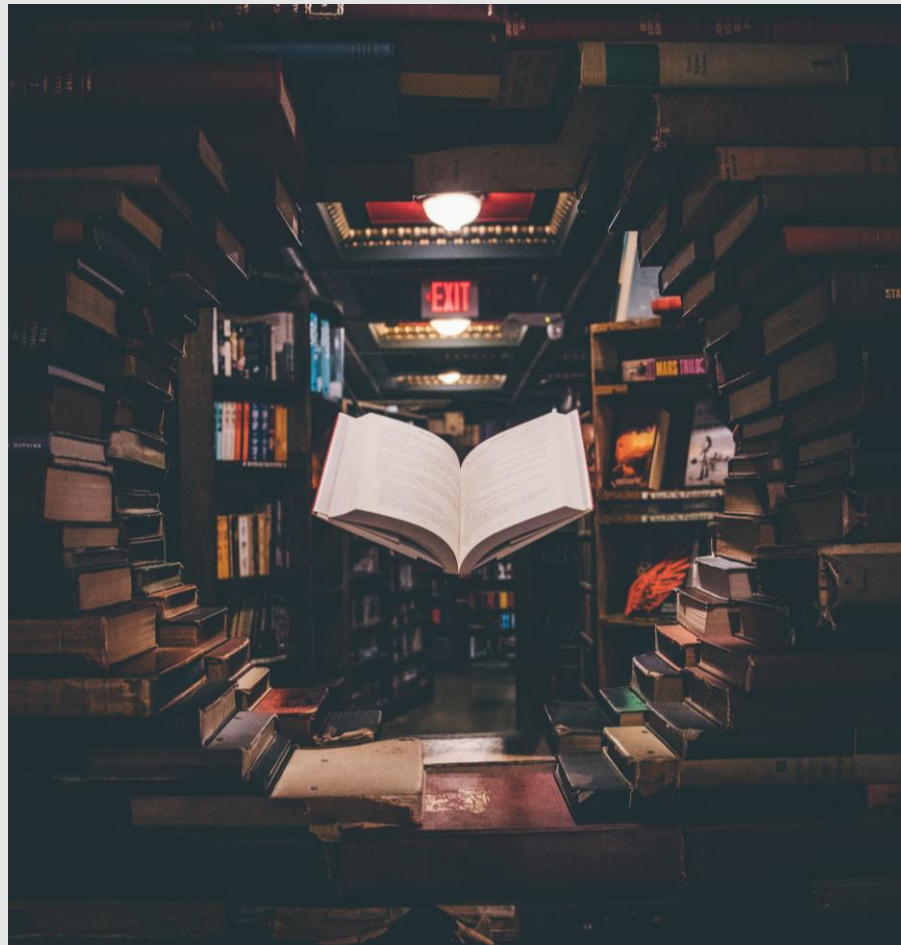




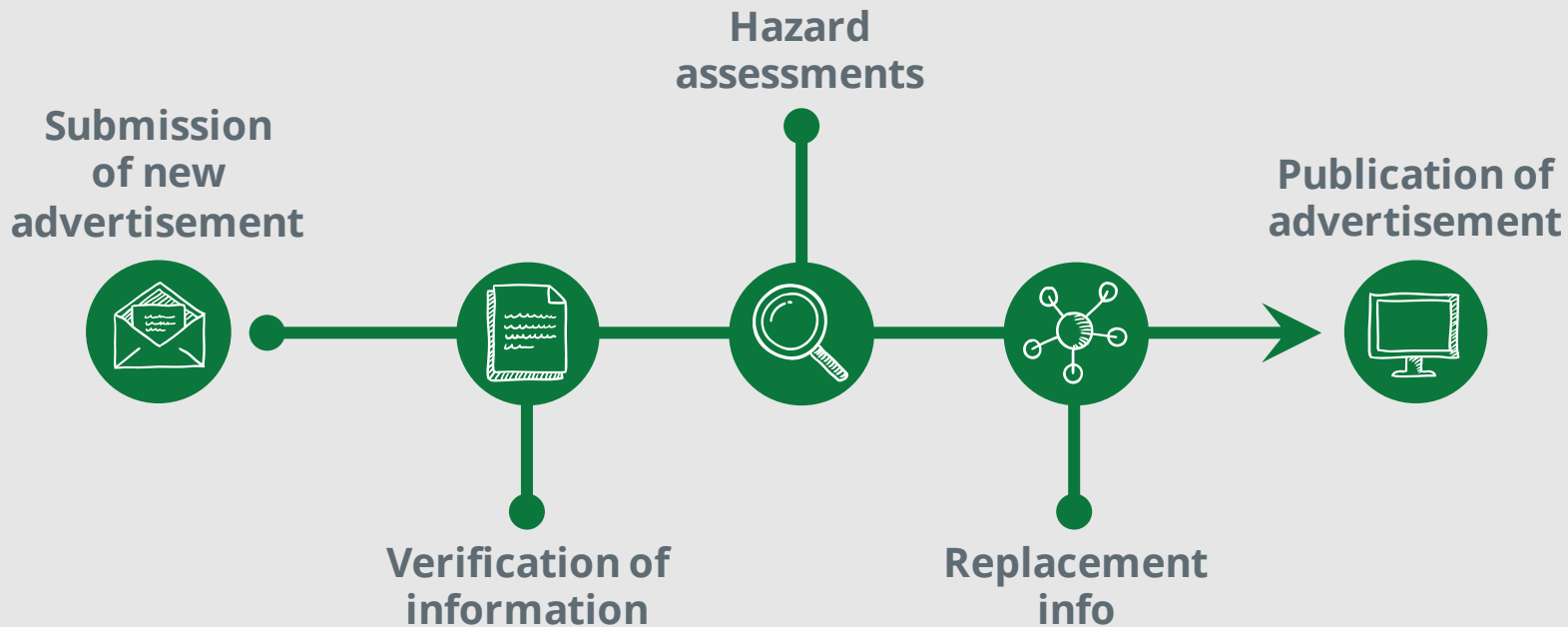
ALTERNATIVE INFORMATION

The information necessary for submitting an ad to Marketplace:

- Function and uses
- Short description
- Standards and/or 3rd party verifications
- Hazard information (if available)



HOW WE ASSESS ALTERNATIVES





NUMBERS AND STATS

- 634 ads
- 2 contacts made per day
- 3,000 users per month
- 4,000 ad pageviews per month



NEXT STEPS

- Alternatives to persistent substances
 - PM substances
 - PFAS substances
- Substances connected to upcoming restrictions from restriction roadmap
- Continuous work!

THANK YOU FOR LISTENING



THANK YOU



CHEMSEC CHANNELS

- **Website:** chemsec.org
- **SIN List:** sinlist.chemsec.org
- **Marketplace:** marketplace.chemsec.org

- **LinkedIn:** [@chemsec](https://www.linkedin.com/company/chemsec)
- **Twitter:** [@chemsec](https://twitter.com/chemsec)
- **Instagram:** [@pfas_movement](https://www.instagram.com/pfas_movement)
- **Facebook:** [@chemsecsweden](https://www.facebook.com/chemsecsweden)



Conclusions

**Webinar: Analysis of alternatives
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Adam Elwan
Communications
European Chemicals Agency



Key messages

- Increased focus on alternatives
- Substitution is key for health and environmental safety – also for your brand
- Involvement of key players
- Don't wait for regulation to catch-up, start assessing alternatives and making a change
- A lot of material available to support you - make use of it



Live Q&A

- Join Q&A at: slido.com
Event code: #aoabio, or with the QR code
- Panellists reply until 16:30
Helsinki time (EEST, GMT+3)
- Q&A document with replies to all questions soon after the event



Thank you

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