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UITVOERINGSPROGRAMMA
BODEM & ONDERGROND

POP-UP project

A guidance for emerging contaminants

ENSOR meeting, 18 May 2020

Martijn van Houten, Witteveen+Bos

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POP-UP project

A guidance on how to deal with emerging contaminants in soil, groundwater and sediments, that consists of prevention, signaling and a pragmatic framework.

Presenter: Martijn van Houten
Project manager POP-UP project
Witteveen+Bos

Team: Hans Slenders MSc – Arcadis,
Marloes Luitwieler MSc – Bioclear earth,
Arne Alphenaar PhD – TTE Consultants,
and others.

ARCADIS Design & Consultancy for natural and built assets

bioclear earth

TTE consultants

Witteveen+Bos

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Summary

1. The POP-UP project
   - Situation in the Netherlands
   - Objectives
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   - Budget and timing

2. Our deliverables

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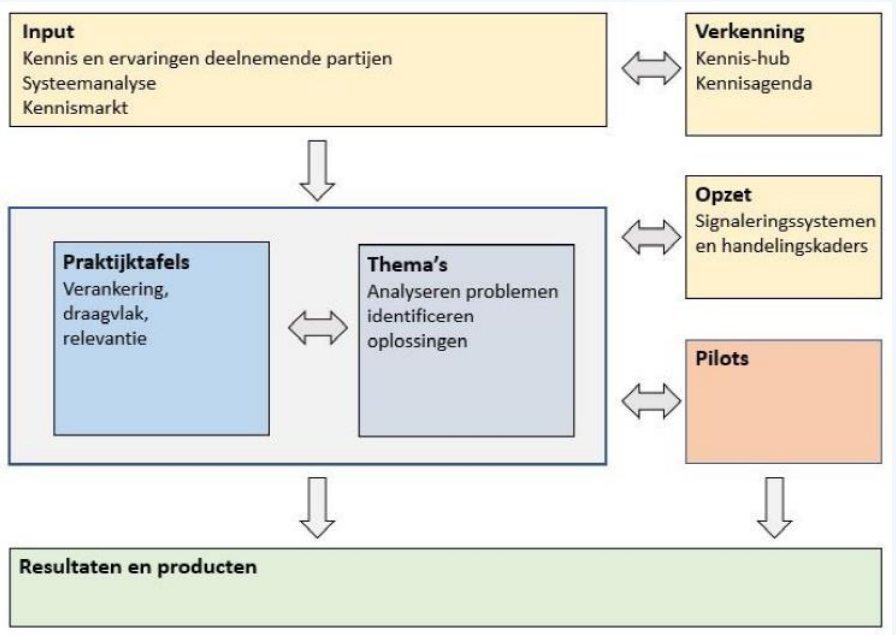

Situation in the Netherlands

- Last decades: awareness and concerns
- Sustainable land management and circular design aren't possible, if we can't deal with emerging contaminants

Bron: Barnevelds dagblad


nrc.nl

Chemische stof pyrazol gevonden in de Maas

Het water in de rivier de Maas is vervuild geraakt met de chemische stof pyrazool, doordat een zuiveringsinstallatie op het industriecomplex Chemelot in Sittard niet goed functioneerde. De vervuiling is zo groot dat de Waterleiding Maatschappij Limburg voorlopig geen Maaswater kan gebruiken voor de drinkwaterwinning. Dat meldt de site 1Limburg. De problemen moeten binnen een week verholpen zijn. De vervuiling zou geen gevolgen hebben voor de volksgezondheid.

bron: www.nrc.nl

bron: www.nos.nl

Situation in the Netherlands

Dutch policy and legislation doesn't fit well for emerging contaminants

Known substances => established policies, applicable laws and regulations, proven methods of soil investigation and remediation techniques, formally approved knowledge products, etc.

Emerging contaminants =>not covered by current regulation or legislative activities, other than general (EU) principals like standstill and duty of care.

Note: there's a difference between EC and SVHC (see also: https://rvs.rivm.nl/)

Situation in the Netherlands

Dutch situation may be different compared to other EU countries

In the last decade, the central government's responsibilities have shifted to the regional and local authorities. They must make their own regional or local policies.

More information about our legislation: https://rwsenvironment.eu/subjects/soil/

But …, local authorities are not sufficiently equipped for dealing with emerging contaminants.

(based on the recent experiences with PFAS in the Netherlands).

- How to preserve a healthy soil? Who's responsible?
- What to do and how to measure? Is an adjustment of policies or legislation needed?

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Objectives POP-UP project

A guidance for emerging contaminants

- Risk management strategy
  - Prevention: what new elements are needed to improve prevention
  - Signaling: how to signal new substances and limit further spreading
- A framework for local and regional authorities
- Recommendations to keep knowledge and expertise accessible and applicable

Activities: literature studies, workshops, pilot projects, interview rounds, etc.

Client and partners

Covenant on Soil and Subsurface 2016-2020

[https://www.bodemplus.nl/onderwerpen/bodem-ondergrond/bodemconvenant/]

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Participating governments and partners

- Provinces: Zuid-Holland, Drenthe, Utrecht, Noord-Holland, Groningen and Gelderland
- 9 regional Environmental protection agencies (oa DCMR, OD Utrecht, RUD Drenthe, GOO)
- Local partners: Arnhem, Groningen, Afvalzorg

Research and innovation partners

KWR Watercycle Research Institute

WAGENINGEN UNIVERSITY & RESEARCH

Rijksinstituut voor Volksgezondheid en Milieu
Ministerie van Volksgezondheid, Welzijn en Sport

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Budget and planning

Budget:

- 400 kEUR: Covenant on Soil and Subsurface 2016-2020
- 220 kEUR: Participating governments and partners

Planning:

- Start: November 2018
- Execution of pilots: October 2019 – April 2020
- Finish products and share knowledge: May 2020 – November 2020

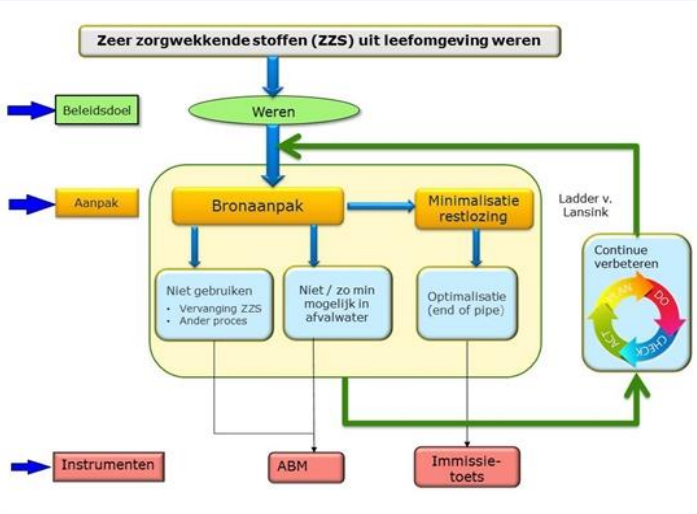
2. Our deliverables

- Risk management strategy
  - Prevention
  - Signaling
- Framework for local and regional authorities
- Recommendations to keep knowledge and expertise accessible and applicable

Risk management

Prevention

- Summary of state of art prevention SVHC
  - EU regulations for SVHC
  - Dutch legislation: ZZS, permits for discharges



- Bottlenecks and recommendations
  - How to deal with future *possible* SVHC: already use or restrict?
  - Give clear information about substances, throughout the system and lifecycle
  - Invest in experts and knowledge about chemistry, toxicology, etc

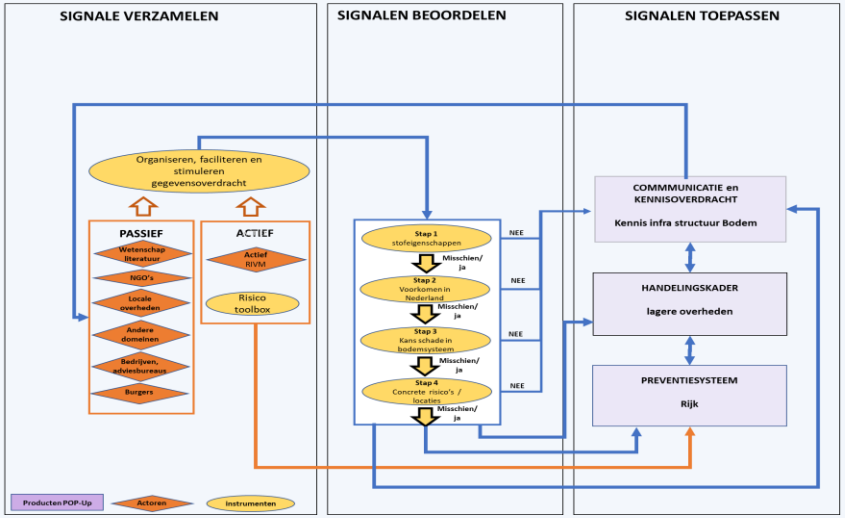
Risk management

Signaling

Management system for:

- *Collecting:* active or passive
- *Assessing:* behavior, fate , (eco-)toxicology
- *Applying:* refer to other POP-UP products

(prevention, framework and instruments, knowledge infrastructure, communication).



Developed together with RIVM and expertise from EU Solutions project

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Framework and pragmatic instruments

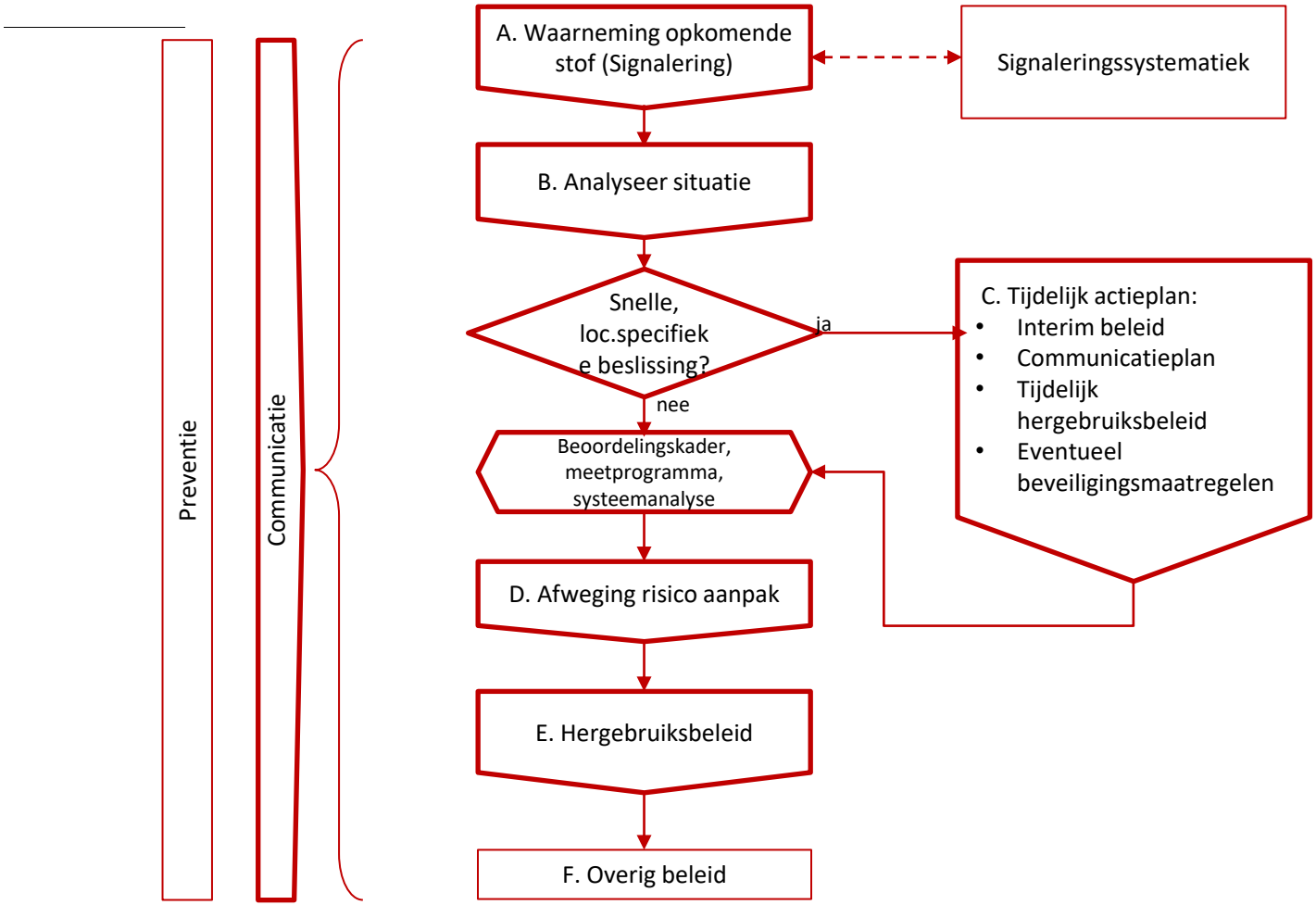
Detailed diagrams

Instruments and instructions

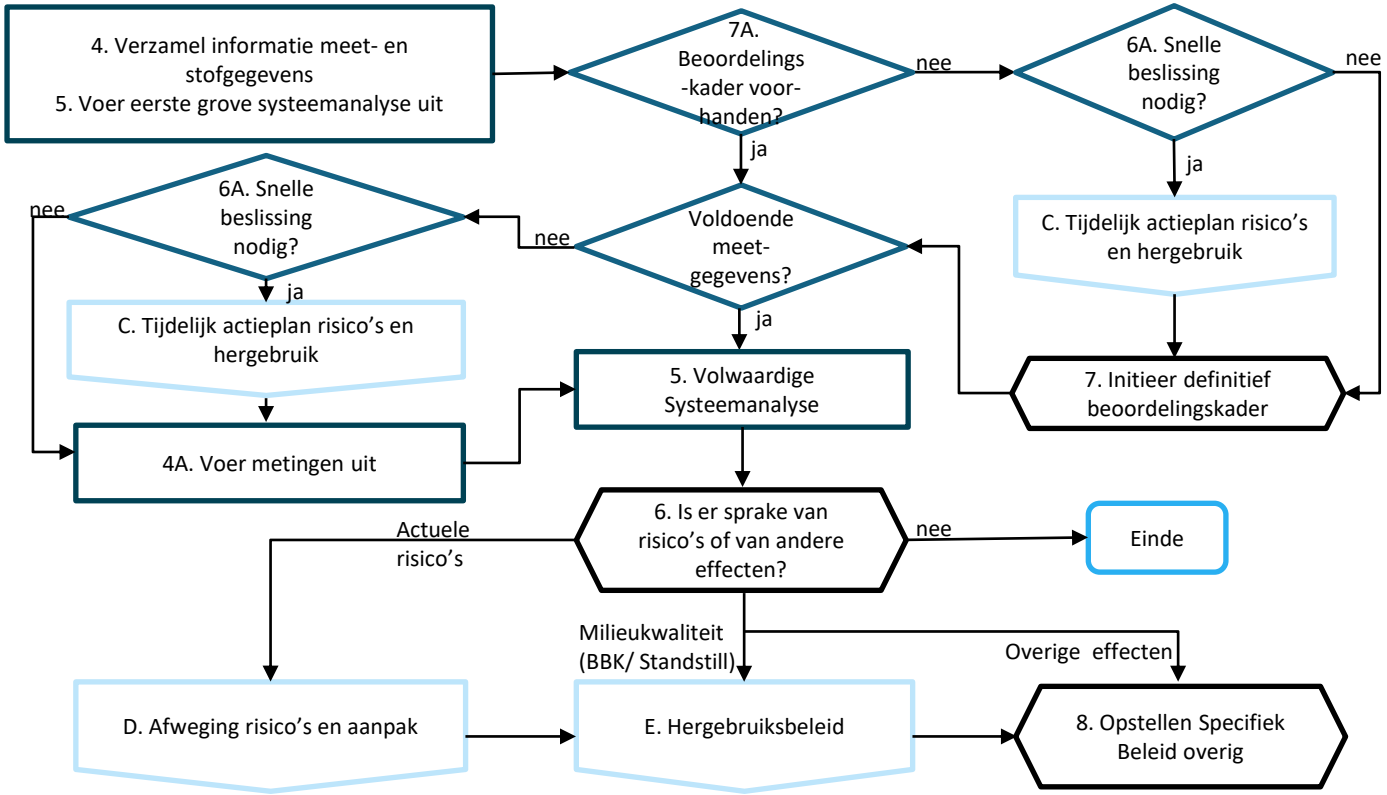
Emerging contaminants and their effects for sustainable and circular economy

Communication, with focus on communication by (and with) governors

Samenhang onderdelen Handelingskader



Stroomschema B: Analyseer de situatie



3. First conclusions

Complex discussion (maybe due to the PFAS 'experience' in the Netherlands)

Straight forward tools and detailed diagrams with valuable information to use, but …

… we see **four** bottlenecks that need attention:

- *Tight policies on standstill and 'duty of care'*
- *Unclear roles and responsibilities between central, regional and local authorities*
- *Fuzzy and scattered knowledge infrastructure*
- *An integrated approach is necessary*

Tight policies on emerging contaminants

Bottleneck

Dutch legislation and policies (in particular: standstill and duty of care) are not suitable for emerging contaminants that don't have threshold or guidance values, because the presence and the background values are largely unknown.

Result

If a new contaminant pops up, authorities don't have an effective strategy and stagnation arises.

Recommendations

- Do not use the detection limit as a default background level to maintain standstill.
- Central directions on guidance values are needed, avoid a scattered field of guidance values

Unclear roles

Bottleneck

Unclear roles between central government versus regional or local responsibilities

Result

In case a contaminant pops up, authorities do not have clear who's responsible to act, nor have an effective approach. Stagnation arise due to uncertainties and discussions between the authorities.

Recommendations

An effective approach to tackle uncertainties with emerging contaminants needs a clear strategy. Regional or central guidance is necessary to support local authorities with their actions.

Maintain knowledge and networks

Bottleneck

Emerging contaminants will occur. Knowledge about behavior of substances, fate, toxicology or legislation is needed to make the transition towards a sustainable and efficient (re)use of soil gainful. Shifted responsibilities led to loss of knowledge or deformation of existing networks.

Result

Authorities don’t have the expertise nor the network ,… and stagnation arises.

Recommendations

Maintain (international) networks and invest in the exchange of knowledge and information.

An *integrated* approach is necessary

Bottleneck

We use substances in our products and industrial processes. These substances diffuse in air, water and soil. Our legislation doesn't automatically fit with this behavior.

Result

Substances shift from compartment to compartment and effects the environment (or our health) in an unexpected pathway.

Recommendations

Develop integral legislation and methods for the assessments of exposure and emissions, and not per compartment.

Thank you for your attention

Questions and discussion

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Project Leader	
Project Director	M. van Houten BSc.
Author(s)	M. Van Houten
Checked by	M. Van Houten, H. Slenders, M. Luitwieler, A. Alphenaar, W. Hendriks
Approved by	M. Van Houten
Initials	

Witteveen+Bos Raadgevende ingenieurs B.V. | Leeuwenbrug 8 | P.O. Box 233 | 7400 AE Deventer | The Netherlands | +31 570 69 79 11 | www.witteveenbos.com | CoC 38020751