PFAS in Flanders: Innovative monitoring

01 Feb - 04 Feb 2024

Poll results

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Multiple-choice poll

How can we tackle the enormous diversity of chemical substances in the environment, which makes it impossible to quantitatively monitor each substance separately?

Monitoring a selected number of representative parameters as a proxy

16 %

21 %

More focus on analysis of sum parameters

More focus on ecotox analyses

More focus on non-target screening

29 %

33 %

Other

1 %

Which environmental matrices should receive more attention in the future with regard to research and/or monitoring?







(1/5)

- Standards
- Lower levels needed
- Griet
- Big data
- Brains (from everyone)
- Standards
- Standards
- Lab capacity
- Scope of what is included
- Forensics
- Standard
- Standard
- Low cost continuous sensing

- Regulatory acceptance
- Speed
- Cost
- Big data
- Semi quantification
- Standards
- Standards
- More sampling
- Standards
- Validated protocols
- Analytical standard methodes
 Skilled technicians Reference
 material

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- Research budgets
- Speed
- Standardisation
- Standadisation
- Realtime online measurements
- Quantitfication
- Artificial intellegence
- Artificial Intelligence
- Reference
- Costs
- Knowledge must be actionable
- Certified reference materials
- Protocols

- FAIR data approach
- Centralising data results
- Online analysis
- Reliability
- Guidance on semi-quantification
- Reference values
- Understanding the data/ ouput
- Validation
- Machine learning
- Regulation
- Standards
- Inspectors
- Higher accuracy





(3/5)

- (Eco)Toxicological information
- Laboratories
- New Methodologies
- Lower Detection limits
- Money
- Analysis require a framework
- More sampling
- Money
- Lab capacity
- Money
- Some kind of threshold levels
- Data
- Standards

- Standardisation
- Presicion
- More sensitivity
- Lower price
- Harmonisation between Labs
- Procedure
- Standardization and more labs offering
- Reduced costs
- Harmonized méthodologies
- Protocols
- Knowledge sharing
- Developping methods







- (4/5)
- Quantitative analysis results of **ALLreport NTA**
- Faster and cheaper
- Standardization
- Reference values!
- Norms
- Framework of standards
- Automatisation
- Clear methods
- Machine learning
- Higher accuracy
- Chemical standards
- Reference database

- Money
- Lower detection limits
- European standard
- Laboratories
- Standards
- Legislative support
- More research
- Data sharing
- 🔹 Data is power 🦐
- Cost and time
- Standards and political will
- Reduced cost
- Reference values



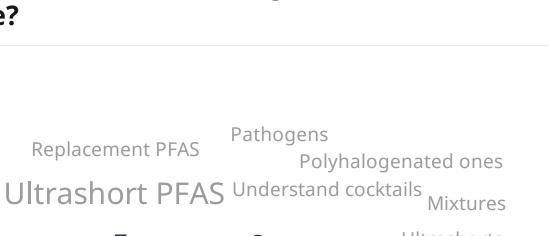
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- (5/5)
- Substance Prioritization
- Standardisation
- Standardisation
- Faster data analysis
- Quantification limit
- Cheaper

Short chain PFAS

If you could nominate one substance or substance group for future monitoring, which one would that be?



Organotin Ultrashorts Phenol Triazool Microplastics BFRs PFAS Glyphosate PFBA POP PGESticides Nanoplastics Siloxanes POP TFA APIs Drugs

Endocrine disruptors

Cr VI Medicines Flame retardants Bisphenols

Perfluoropolyethers

PF phosphonic acids



What are the arguments for applying human biomonitoring complementary to environmental monitoring networks? (1/5)

- Humans usually care more about things that affect them directly! So to build messages
- Convince politicians to act
- More data for causal AI
- Right Wing politicians at least care about health
- Capture effect on most vulnerable groups
- Risk
- Media catching
- Correlation health and environment
- Create willingness to

take preventative actions

- Correlation
- Exposure assessment
- More active engagement from the public
- Wholistic approach
- Link between environment levels and toxicity
- To learn the interaction
- Understand fate
- Exposure / risk assessments
- Persistent effects on humans
- Measure actual exposure

What are the arguments for applying human biomonitoring complementary to environmental monitoring networks? (2/5)



- Environmental Health
- Exppsure
- Global health
- Integrated approach
- Health risks
- Awareness
- One Health
- Griet
- awareness bringing action
- Pollution gets personal
- Risk evaluation exposure
- Effects
- Exposure

- Exposure monitoring at receptor
- Health policies
- Exposure
- Scenario analysis
- Human health
- Risk assessment
- track remedial outcome
- Need huge dataset to prove what impacts are statistically
- Awareness
- Exposure pathways
- Health effects
- More attention to the problem



What are the arguments for applying human biomonitoring complementary to environmental monitoring networks? (3/5)

- It's a summary of human exposure
- Better understanding of the effects of environmental pollution
- Direct and indirect exposure pathways for humans
- Knowledge on consumer exposure
- Risk managent
- Health
- Correlation
- Impact
- Cause and effect
- Full understanding

- Understanding the actual exposure effects
- Policy relevance
- Relation with exposure
- Cause effect
- Only useful if tox is known
- Information on Cumulative Exposure
- One level higher in risk evaluation
- Weighted risk assessment
- Risk assessment
- Health effects
- Statistical data



What are the arguments for applying human biomonitoring complementary to environmental monitoring networks? (4/5)

- Relevance of need for regulation
- Risk reduction
- Understand source to dose
- True exposure
- Public communication
- Measure effectieve exposure
- Epidemiology
- Health risks
- Prioritizing
- Asses exposure
- One health
- Awareness
- Risk assessment

- integrated measurement
- Effects
- Prevention
- Health impacts
- Cause-effect
- Holistic evaluation of exposures
- Health
- Impact
- Linking spatial variations
- To mesure exposition
- Measure direct effects
- Human health effects
- Helps with cause



What are the arguments for applying human biomonitoring complementary to environmental monitoring networks? (5/5)

and effect analysis

- No necessary link between both
- More political attention
- Common sense
- Better understanding of impact on humans
- Need to take a risk-based approach for emission limits
- Impact on humans
- Pollution gets personal
- Knowledge
- Early warning
- Public awareness

- One health
- Correlation
- Direct proof of risk
- One Health
- risk assessment
- Exposure
- Awareness raising
- Toxicology
- Cause and effect



What message or comment would you like to give us as feedback on this session or recommendation for the future? (1/4)

- Attention to collateral damage done by zero emission targets
- Create partnership with industry
- Stop eating eggs with your bacon!
- Thank you
- Panel debat with industrie
- Answers on regulations! Still unclear
- Thanks!
- Extra focus on future research on PFAS sensing
- Link monitoring results to future policy

- Please provide the presentations!
- Keep up this vers strong work
- Reporting to plenary from parallel sessions
- Balance.... Still a lot we don't know about PFAS, highlight the gaps
- Emphasis on interactive discussions
- Very interesting!

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 More teenagers to be tested so we can build engagement and interest in the younger generation!

What message or comment would you like to give us as feedback on this session or recommendation for the future? (2/4)



• Focus on massive hurdles for industry

- Debate time
- Discussion both within and without timetabled sessions
- Enough resources
- Very inspiring!
- More time indeed on this topic
- Better link between science and policies
- What are biggest challenge?
- Allowing Questions after the presentation

- Some more lessons learned : what works, what doesn't work
- Well organised and a lot of interesting results
- Engage people, Time for debate
- Communicate widely
- Thanks for hosting
- More specific questions
- keep going
- Pannel debate
- Combine data
- Good job
- Results

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What message or comment would you like to give us as feedback on this session or recommendation for the future? (3/4)



- Slido
- Present (planned) actions not only results
- Thanks
- Thanks for the quality of the session !
- More time !!!
- Congratulations
- Degrowth
- Longer coffee break!
- Connect among affected hotspot areas across Europe
- Good initiative, to be repeated, not just for pfas.

- Work together with industry
- Keep up the good work description
- Thanks!
- some time for discussion
- Good overview of monitoring activities, Impressive!
- Keep doing the good work
- Collaborate across domains
- Allow for Q&A
- Moderate open answers
- Great work!
- more slidos
- Thank you 😉

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- More time for discussion
- How to we turn the data into action
- Involve Griet
- Keep going