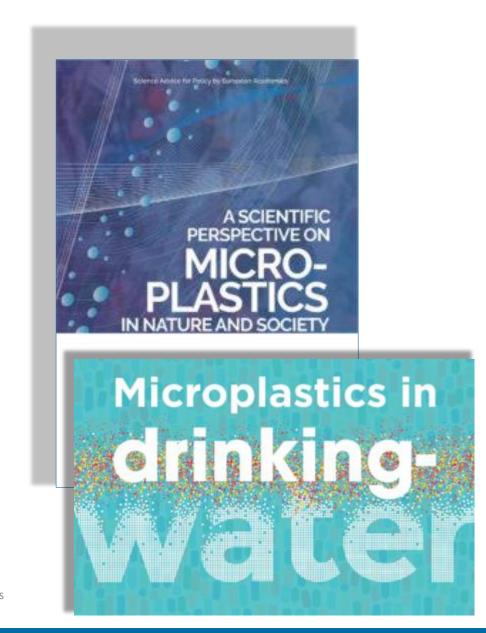
# Microplastics in nature and society: A scientific perspective

of the European Academy consortium Science Advice for Policy by European Academies

#### **Bart Koelmans**

Wageningen University, The Netherlands bart.koelmans@wur.nl





## 25 Working Group Members

## Professor Bart Koelmans, University of Wageningen (Netherlands), Chair Associate Professor Dr Sabine Pahl, University of Plymouth (United Kingdom), Vice-Chair

Professor Thomas Backhaus, University of Gothenburg (Sweden)

Dr Filipa Bessa, University of Coimbra (Portugal)

Professor Geert van Calster, KU Leuven (Belgium)

Dr Nadja Contzen, University of Groningen (Netherlands)

Richard Cronin, Water and Marine Advisory Unit (Ireland)

Professor Tamara Galloway, University of Exeter (United Kingdom)

Professor Andy Hart, Newcastle University (United Kingdom)

Dr Lesley Henderson, Brunel University London (United Kingdom)

Assistant Professor Dr Gabriela Kalčíková, University of Ljubljana (Slovenia)

Professor Frank Kelly, King's College London (United Kingdom)

Dr Bartlomiej Kolodziejczyk, Stockholm University (Sweden)

Professor Elda Marku, University of Tirana (Albania)

Professor Wouter Poortinga, Cardiff University (Wales, United Kingdom)

Professor Matthias Rillig, Freie University Berlin (Germany)

Associate Professor Dr Erik Van Sebille, Utrecht University (Netherlands)

Professor Linda Steg, University of Groningen (Netherlands)

Professor Josef Steidl, Czech Technical University Prague (Czech Republic)

Dr Julia Steinhorst, Institute for Advanced Sustainability Studies (Germany)

Associate Professor Dr Kristian Syberg, Roskilde University (Denmark)

Professor Richard Thompson, University of Plymouth (United Kingdom)

Associate Professor Dr Martin Wagner, Norwegian University of Science and Technology (Norway)

Professor Annemarie van Wezel, KWR Watercycle Research Institute and Utrecht University (Netherlands)

Dr Kayleigh Wyles, University of Surrey (United Kingdom)

Dr Stephanie Wright, King's College London (United Kingdom)



## A Scientific Perspective on: Microplastics in Nature and Society

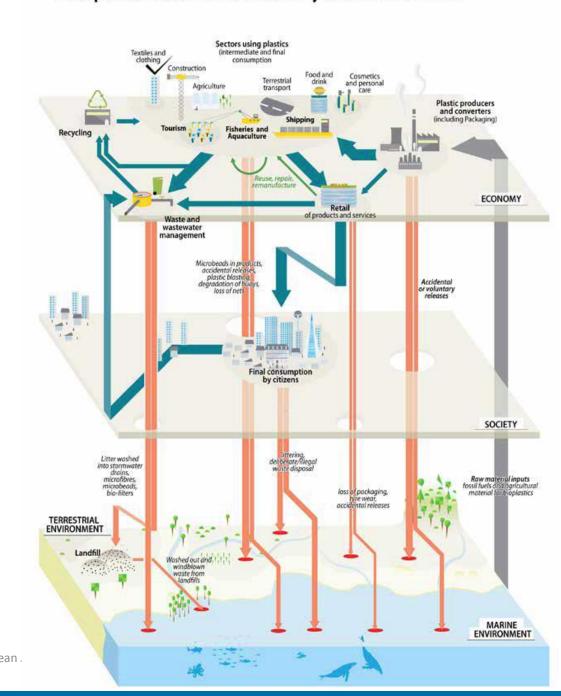
- Evidence review report (ERR)
- Systematic literature search
- A review of reviews
- New literature 2016-2018.
- Expert judgment
- Separate known from unknown
- External review
- Release ERR: January 10<sup>th</sup> 2019
- Microplastics Pollution Round-table, G7
  Washington, February 2019
- Stakeholder meeting April 26<sup>th</sup> 2019
- SAM Scientific Opinion April 30<sup>th</sup>
- Applicable to other topics, e.g. SDGs





## Society (Ch 3) Sources of Microplastics 4 **Policies Environment** ■ Influence √ · · · · · □ Interaction Outcome Policy Options Health, Environmental etc. Science Advice for Policy by European Science Advice for Policy by European Academies

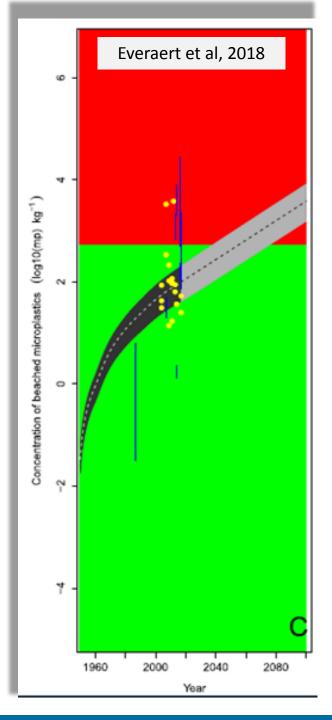
#### How plastic moves from the economy to the environment



### **Conclusions microplastics in environment**

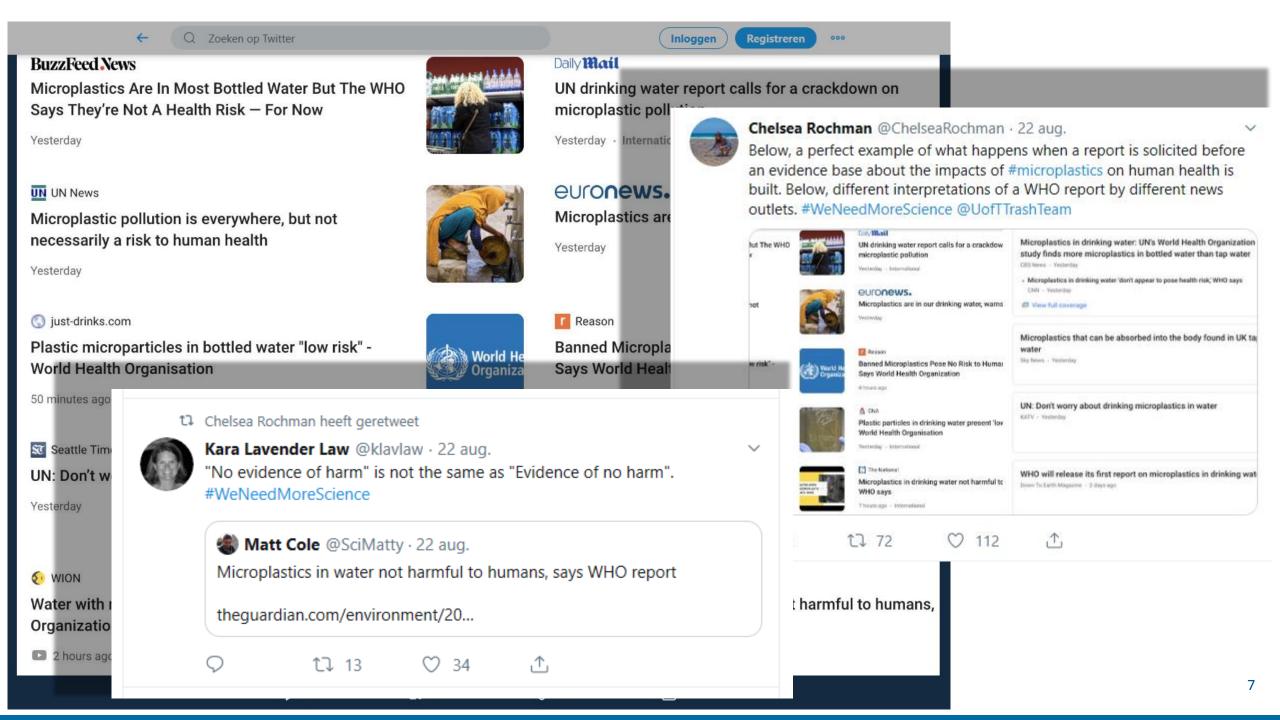
- Currently there may some locations where environmental concentrations exceed the predicted no-effect level, however, there is no evidence for widespread ecological risks.
- If emissions remain the same, ecological risks may be widespread within a century
- 3. Even though 'high quality' risk assessment is not yet feasible, action to reduce, prevent and mitigate is suggested (as an *option* for policy)
- 4. At the same time, it is <u>important to develop and use risk</u> <u>assessment approaches</u> to be able to prioritize these actions, and to plan where and when to apply them.





The best available evidence suggests that microplastics and nanoplastics do not pose a widespread risk to humans or the environment, except in small pockets. But that evidence is limited, and the situation could change if pollution continues at the current rate.

- → How do you communicate 'no evidence of harm', if:
- There is little evidence
- The evidence is contradictory
- The evidence is uncertain





### De WHO is wél bezorgd om microplastics in drinkwater

donderdag 22 augustus 2019, 16:49 uur



00:00 / 08:40

Microplastics in drinkwater vormen geen bedreiging voor de volksgezondheid', 'Microplastics in water niet schadelijk voor de mens,\* WHO: concentratie microplastics in drinkwater geen bedreiging voor volksgezondheid \*, 'De Wereldgezondheidsorganisatie WHO is niet bezorgd om microplastics'.

Het zijn een aantal koppen van verschillende nieuwsmedia over het nieuwe rapport van de Wereldgezondheidsorganisatie WHO over microplastics in drinkwater. Maar zegt de WHO dat eigenlijk wel allemaal? Maakt het zich geen zorgen dat microplastics mogelijk schadelijk zijn voor de mens? Want in haar officiële communicatie roept de Wereldgezondheidsorganisatie juist op om dringend meer onderzoek te doen naar de microplastics en het risico op menselijke blootstelling te vermijden.

We praten er over met hoogleraar waterkwaliteitsbeheer Bart Koelmans van de Universiteit Wageningen. Koelmans is een van de co-auteurs van het WHO-rapport.

<sup>\*</sup> Deze media pasten hun kop later nog aan.











Thank You