

Swiss TPH



Swiss Tropical and Public Health Institute  
Schweizerisches Tropen- und Public Health-Institut  
Institut Tropical et de Santé Publique Suisse

# **Bringing Science back to Clean Air Policy Making – a Response to Fakes Celebrated by (a few) Media in Germany**

**Prof. Nino Künzli, MD, PhD**

Deputy-Director Swiss Tropical and Public Health Institute Basel (SwissTPH)

**Presentation in Session «An open Word»**

**23. ETH Conference on Combustion Generated Nanoparticles**

**19.6.2019 13:20-13:40**

Zürich - CH

Swiss TPH is an independent institute, associated with University of Basel



# Hans-Urs Wanner

7.6.1933-20.5.2019

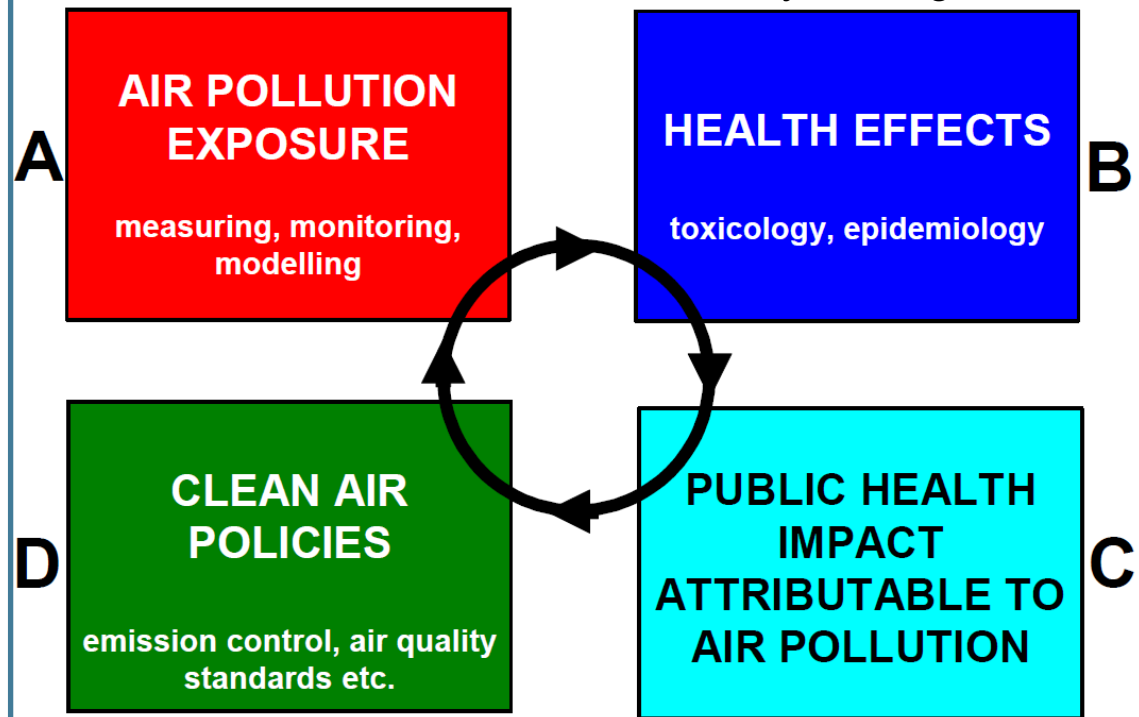
Prof. emeritus ETH Zurich

Member of Federal Commission on Air Hygiene (FCAH) 1981-1996

President of FCAH: 1986-1996

## Environmental Health Policy Cycle

Science-based Clean Air Policy Making



# The 34'145 scientific articles in Web of Science on [air pollution] & [health]

March 2019

Web of Science Categories

Publication Years

Document Types

Organizations-Enhanced

Funding Agencies

Authors

Source Titles

Book Series Titles

Meeting Titles


Countries/Regions

Editors

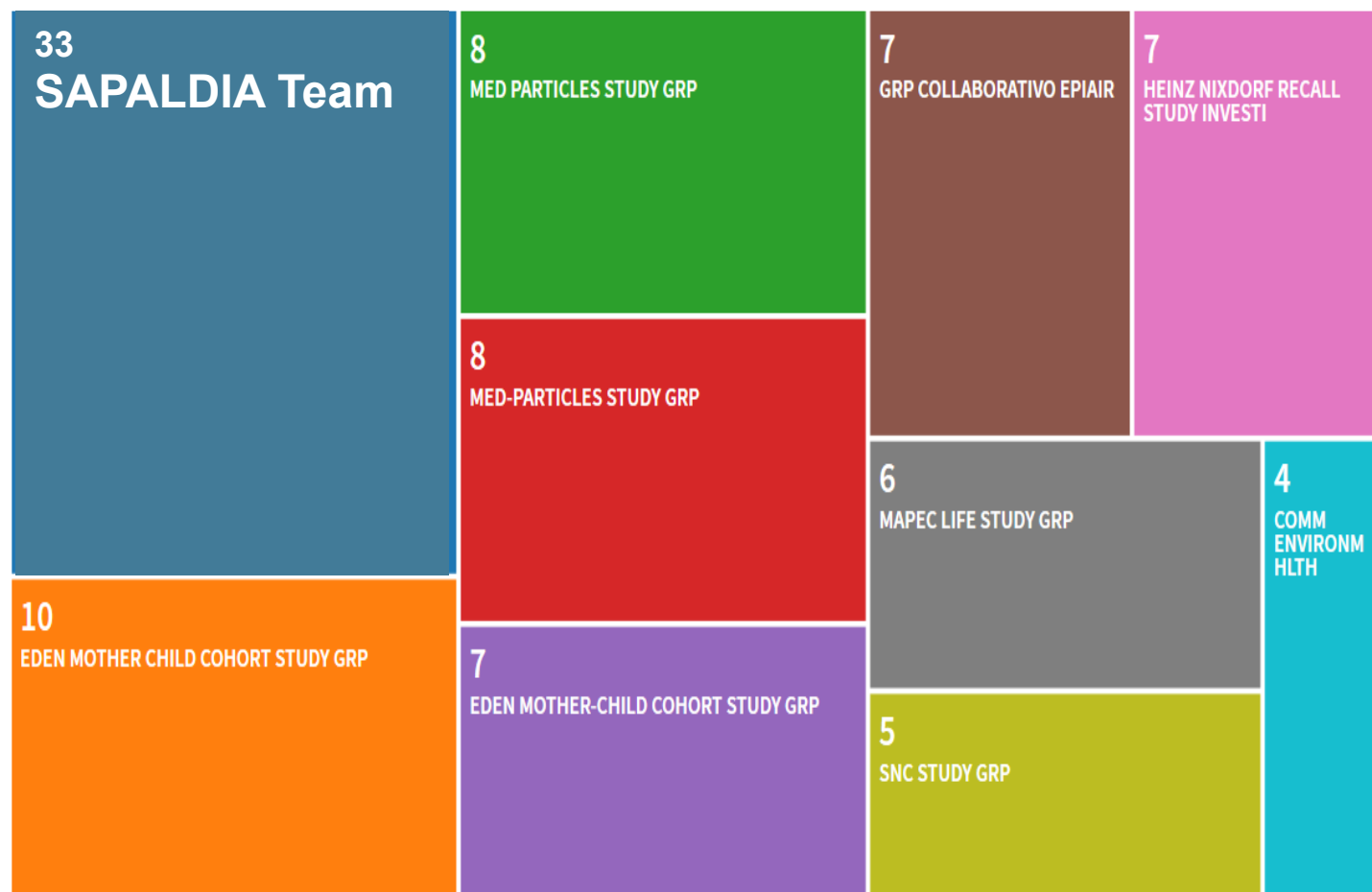
Group Authors

Visualization **Treemap**

Number of results **10**

 Download

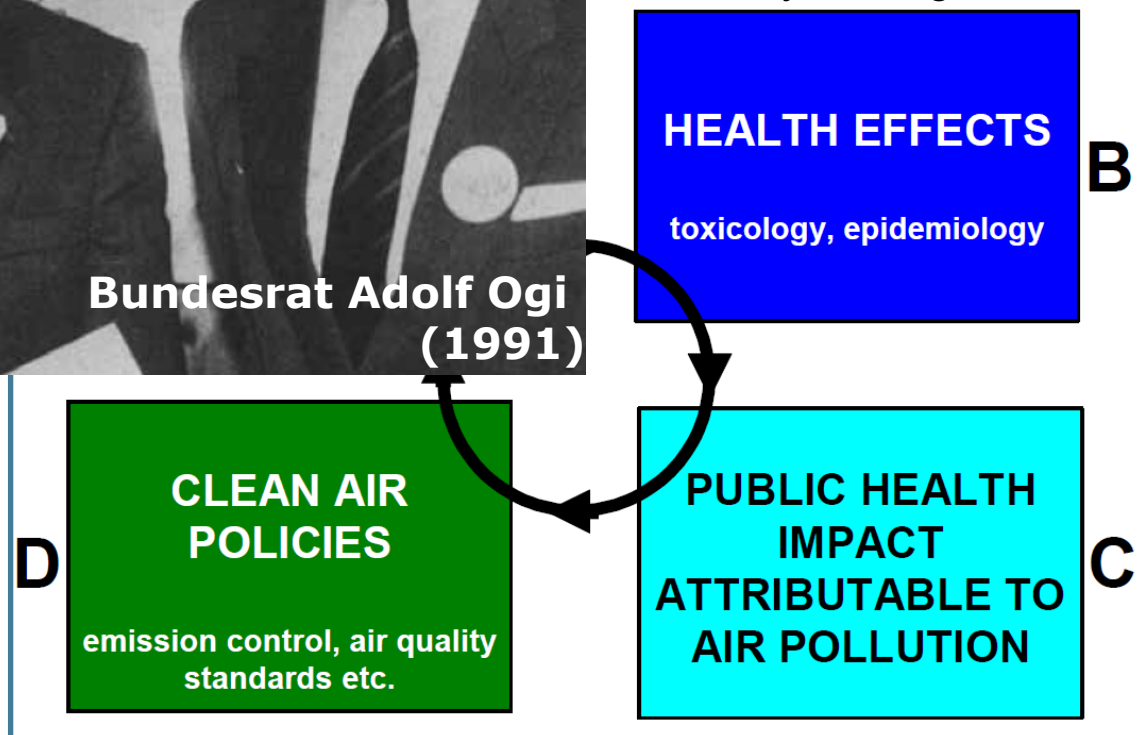
Hide



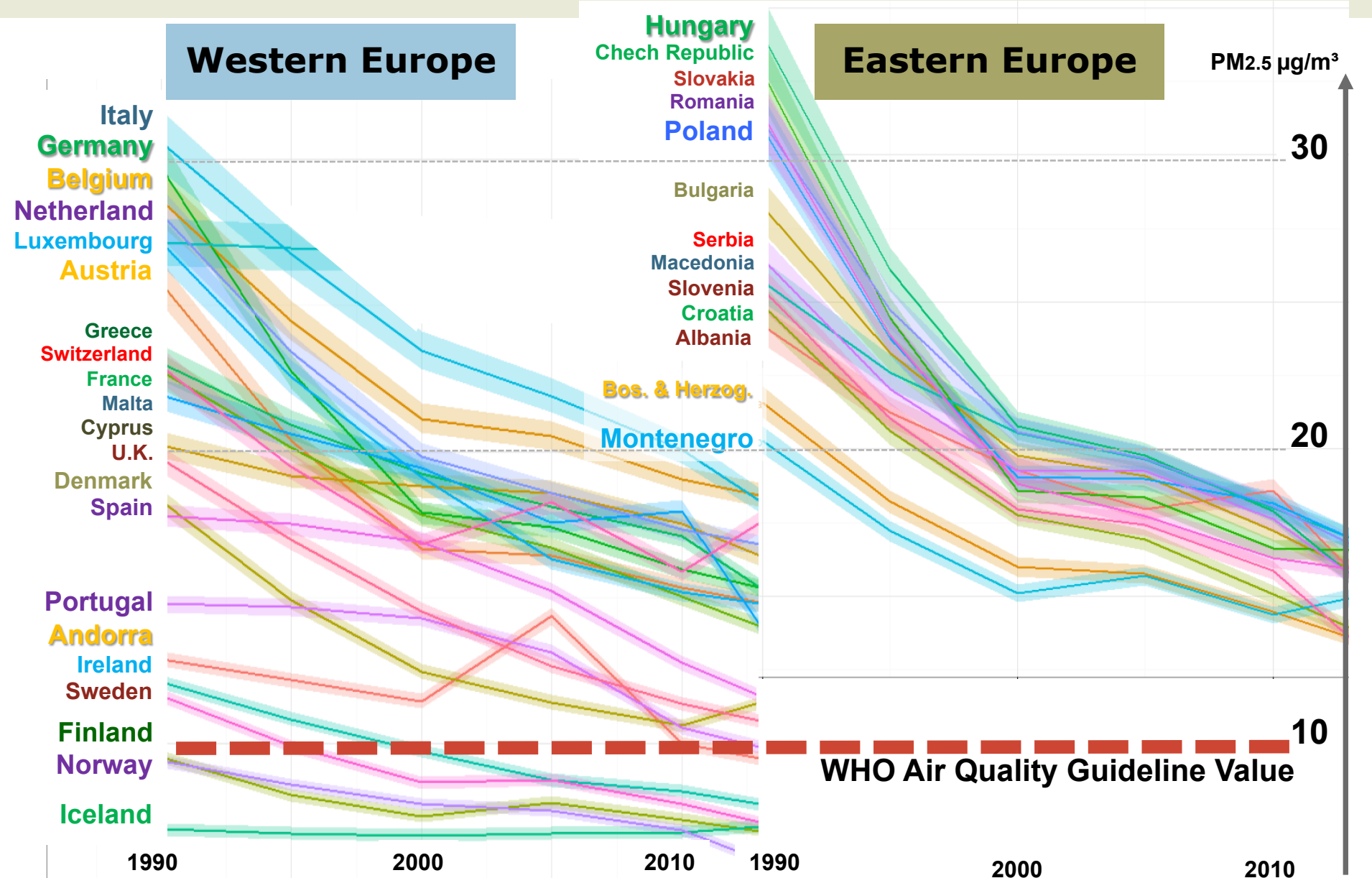


## Health Policy Cycle

in Air Policy Making



# Clean air policies result in improved air quality: Fine particulate matter concentrations (PM<sub>2.5</sub>) 1990 - 2015



## 30 years of «semi-ambitious» E.U. clean air policy making...

1. Promotion of (dirty) diesel until recently!
2. Delay in requiring mandatory particle filters on all vehicles
3. Insufficient control of industry



4. (E.U.) refusal of science-based PM<sub>10</sub> and PM<sub>2.5</sub> LIMIT VALUES

# 20 years of E.U. resistance against science-based «limit values» for PM<sub>10</sub> & PM<sub>2.5</sub>

Int J Pub Health 2017: Kutlar Joss et al (open access)

**Science-based limit values to  
protect public health**

**politically set  
«limit values» to  
protect vested  
interests**

	<b>WHO Air Quality Guideline values</b>	Afghanistan, Cameroon, Canada, Iceland, Iran, Australia Switzerland U.K.	<b>State of Cali- fornia</b>	<b>U.S.A.  Fede-ral;  Mexico</b>	<b>E.U.</b>
<b>PM<sub>10</sub> Annual Mean</b>	<b>20</b> µg/ m <sup>3</sup>	<b>20</b>	<b>20</b>	--	<b>40</b>
<b>PM<sub>2.5</sub> Annual Mean</b>	<b>10</b> µg/m <sup>3</sup>	<b>10</b> (AUST: 8)	<b>12</b>	<b>12</b>	<b>25</b>

## 30 years of «semi-ambitious» E.U. clean air policy making...

1. Promotion of (dirty) diesel until recently!
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## Derailed clean air policy making

1. HEALTH got out of the equation
2. Protection of monitoring stations from «non-compliance»
3. Protection of industry





# Reportage & Dokumentation

Mo 7.1.2019 21:45

[Startseite](#) [Sendungsübersicht](#) [Vorschau](#) [Videos](#) [Kontakt](#)

## Exklusiv im Ersten: Das Diesel-Desaster



Sendetermin

Mo, 07.01.19 | 21:45 Uhr  
Das Erste

### ANDERE SENDUNGEN

< VORHERIGE

NÄCHSTE

ALLE SENDUNGEN

### MEHR ZUM THEMA



# Out of 78,369 authors on [air pollution] & [health] 5 among the “top-100” work in Germany (Web of Science, March 2019)

<input type="checkbox"/> SCHWARTZ J (452)	<input type="checkbox"/> KIM H (124)	<input type="checkbox"/> WANG J (96)	<input type="checkbox"/> CAO JJ (78)
<input type="checkbox"/> BRUNEKREEF B (306)	<input type="checkbox"/> YANG CY (123)	<input type="checkbox"/> KELLY FJ (95)	<input type="checkbox"/> GHIO AJ (77)
<input type="checkbox"/> KOUTRAKIS P (271)	<input type="checkbox"/> KATSOUYANNI K (121)	<input type="checkbox"/> BEELEN R (94)	<input type="checkbox"/> CHAN CC (76)
<input type="checkbox"/> HOEK G (265)	<input type="checkbox"/> LOFT S (120)	<input type="checkbox"/> DEVLIN RB (94)	<input type="checkbox"/> CHEN Y (76)
<input type="checkbox"/> KUNZLI N (213)	<input type="checkbox"/> SAMET JM (119)	<input type="checkbox"/> POPE CA (91)	<input type="checkbox"/> KINNEY PL (76)
<input type="checkbox"/> KAN HD (207)	<input type="checkbox"/> RAASCHOU-NIELSEN O (113)	<input type="checkbox"/> DOCKERY DW (90)	<input type="checkbox"/> ZHANG X (76)
<input type="checkbox"/> HEINRICH J (197)	<input type="checkbox"/> SPENGLER JD (112)	<input type="checkbox"/> PERSHAGEN G (89)	<input type="checkbox"/> ANNESI-MAESANO I (75)
<input type="checkbox"/> LIU Y (189)	<input type="checkbox"/> HOPKE PK (110)	<input type="checkbox"/> GUO YM (88)	<input type="checkbox"/> LURMANN F (75)
<input type="checkbox"/> BRAUER M (187)	<input type="checkbox"/> SCHAUER JJ (110)	<input type="checkbox"/> LADEN F (88)	<input type="checkbox"/> LI X (74)
<input type="checkbox"/> COULL BA (185)	<input type="checkbox"/> BROOK JR (109)	<input type="checkbox"/> XU XH (88)	<input type="checkbox"/> ZHANG Q (74)
<input type="checkbox"/> SUNYER J (184)	<input type="checkbox"/> FORSBERG B (109)	<input type="checkbox"/> LEVY JI (86)	<input type="checkbox"/> VAN DONKELAAR A (73)
<input type="checkbox"/> JERRETT M (182)	<input type="checkbox"/> LI Y (109)	<input type="checkbox"/> PROBST-HENSCH N (86)	<input type="checkbox"/> DE NAZELLE A (72)
<input type="checkbox"/> BURNETT RT (173)	<input type="checkbox"/> DOMINICI F (108)	<input type="checkbox"/> SHEPPARD L (85)	<input type="checkbox"/> HO KF (72)
<input type="checkbox"/> PETERS A (161)	<input type="checkbox"/> GOLD DR (108)	<input type="checkbox"/> CASSEE FR (84)	<input type="checkbox"/> LANKI T (72)
<input type="checkbox"/> FORASTIERE F (159)	<input type="checkbox"/> NIEUWENHUIJSEN MJ (106)	<input type="checkbox"/> KREWSKI D (84)	<input type="checkbox"/> STAFOGGIA M (72)
<input type="checkbox"/> SCHINDLER C (144)	<input type="checkbox"/> WICHMANN HE (106)	<input type="checkbox"/> MARTIN RV (83)	<input type="checkbox"/> WANG L (72)
<input type="checkbox"/> SIOUTAS C (141)	<input type="checkbox"/> CHEN RJ (105)	<input type="checkbox"/> NIEUWENHUIJSEN M (82)	<input type="checkbox"/> ZHANG YH (72)
<input type="checkbox"/> WANG Y (138)	<input type="checkbox"/> SALDIVA PHN (104)	<input type="checkbox"/> HOFFMANN B (81)	<input type="checkbox"/> BACCARELLI AA (71)
<input type="checkbox"/> HARRISON RM (137)	<input type="checkbox"/> DE HOOGH K (101)	<input type="checkbox"/> QUEROL X (81)	<input type="checkbox"/> CHEN LC (71)
<input type="checkbox"/> MORAWSKA L (137)	<input type="checkbox"/> ANDERSON HR (100)	<input type="checkbox"/> BALLESTER F (80)	<input type="checkbox"/> GOLDBERG MS (71)
<input type="checkbox"/> ZHANG Y (132)	<input type="checkbox"/> KAUFMAN JD (100)	<input type="checkbox"/> GEHRING U (80)	<input type="checkbox"/> CHEN H (70)
<input type="checkbox"/> BELL ML (129)	<input type="checkbox"/> PEKKANEN J (100)	<input type="checkbox"/> MITTLEMAN MA (80)	<input type="checkbox"/> CHRISTIANI DC (70)
<input type="checkbox"/> CYRYS J (126)	<input type="checkbox"/> NAWROT TS (99)	<input type="checkbox"/> BROOK RD (79)	<input type="checkbox"/> LI L (70)
<input type="checkbox"/> SMITH KR (126)	<input type="checkbox"/> KLOOG I (98)	<input type="checkbox"/> ZHANG L (79)	<input type="checkbox"/> CAKMAK S (69)
<input type="checkbox"/> ZANOBBETTI A (126)	<input type="checkbox"/> LI J (96)	<input type="checkbox"/> BASAGANA X (78)	<input type="checkbox"/> RAJAGOPALAN S (69)

## «Experts» chosen instead by the ARD authors (Thomas Berbner & Torben Børgers)

**Among the  
78,369 authors on  
[air pollution] & [health] the demagogos  
Köhler and Hetzel  
APPEARE NOT A SINGLE  
TIME...!**

**(Web of Science, March 2019)**



**Prof. emeritus Dieter Köhler**





# Die Rolle der Luftschadstoffe für die Gesundheit

Eine Expertise im Namen der  
Internationalen Gesellschaft für Umweltepidemiologie (ISEE)  
und der European Respiratory Society (ERS)



**Leopoldina**  
Nationale Akademie  
der Wissenschaften

April 2019

Ad hoc-Stellungnahme

## Saubere Luft

Stickstoffoxide und Feinstaub in der Atemluft:  
Grundlagen und Empfehlungen

Prof. Dr. Annette Peters, MSc, Helmholtz Zentrum München und  
Ludwig-Maximilians Universität München,  
ISEE Präsidentin 2012-2013, Mitglied des ISEE Policy Committee

Prof. Dr. med. Barbara Hoffmann MPH, Universität Düsseldorf,  
Vorsitzende des Environment and Health Committee der  
European Respiratory Society, Vorsitzende ISEE Europe 2015-2017

Prof. Dr. Bert Brunekreef, Universität Utrecht, Niederlande,  
ISEE Präsident 2000-2001

Prof. Dr. med. PhD Nino Künzli, Schweizerisches Tropen-  
und Public Health Institut (Swiss TPH), Basel, und Universität  
Basel, Schweiz

Meltem Kutlar Joss, MSc ETH, MPH, Schweizerisches Tropen-  
und Public Health Institut (Swiss TPH), Basel, Schweiz

Prof. Dr. phil. PhD Nicole Probst-Hensch, Schweizerisches Tropen-  
und Public Health Institut (Swiss TPH), Basel, und Universität Basel

Prof. Dr. med. PhD Beate Ritz, University of California,  
Los Angeles, USA, Präsidentin der ISEE

Prof. Dr. med. Holger Schulz, Helmholtz Zentrum München

Priv. Doz. Dr. med. Kurt Straif, MPH, PhD, Lyon, Frankreich

Prof. Dr. med. Dr. H. Erich Wichmann, ehemals Helmholtz  
Zentrum München und Ludwig-Maximilians Universität München

# Don't abandon evidence and process on air pollution policy

*Science* 10.1126/science.aaw9460 (2019)

Gretchen T. Goldman<sup>1</sup> and Francesca Dominici<sup>2</sup>

POLICY

## Pollution rules under siege at US environment agency

Nature, April 2019

*Adviser attacks EPA decision-making ahead of major review of air-pollution standards.*

BY JEFF TOLLEFSON

research. The head of CASAC, Tony Cox, is towards the link between particulate pollutio

# Report

Report no. 15/18



**Air Pollution and Lung Cancer: A Review of Issues Affecting the Interpretation of the Epidemiological Literature**

**multi-national oil & gas companies and refineries**

*Don't trust the «Merchants of Doubt»*

J. A. Tomenson (Causation Ltd)  
D. Morgott (Pennsport Consulting)  
G. B. Copley (ExxonMobil Biomedical Sciences, Inc.)

# Clean air policy priorities under a global health perspective

1. **Stand up against FAKES, HYPES, and fabricated «DOUBTS» about the health effects of NO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub> and air pollution in general**
2. Control adoption of policies to abate manipulation and fraud
3. Adopt the science-based WHO Air Quality Guideline values into national directives & regulations to protect public health
4. Enforce **global** clean air strategies to stop the outsourcing of pollution and its health effects from rich to poorer regions!
5. Call for the enforcement of stringent, sustained and socially just clean air policies and management plans

# Clean air policy priorities under a global health perspective

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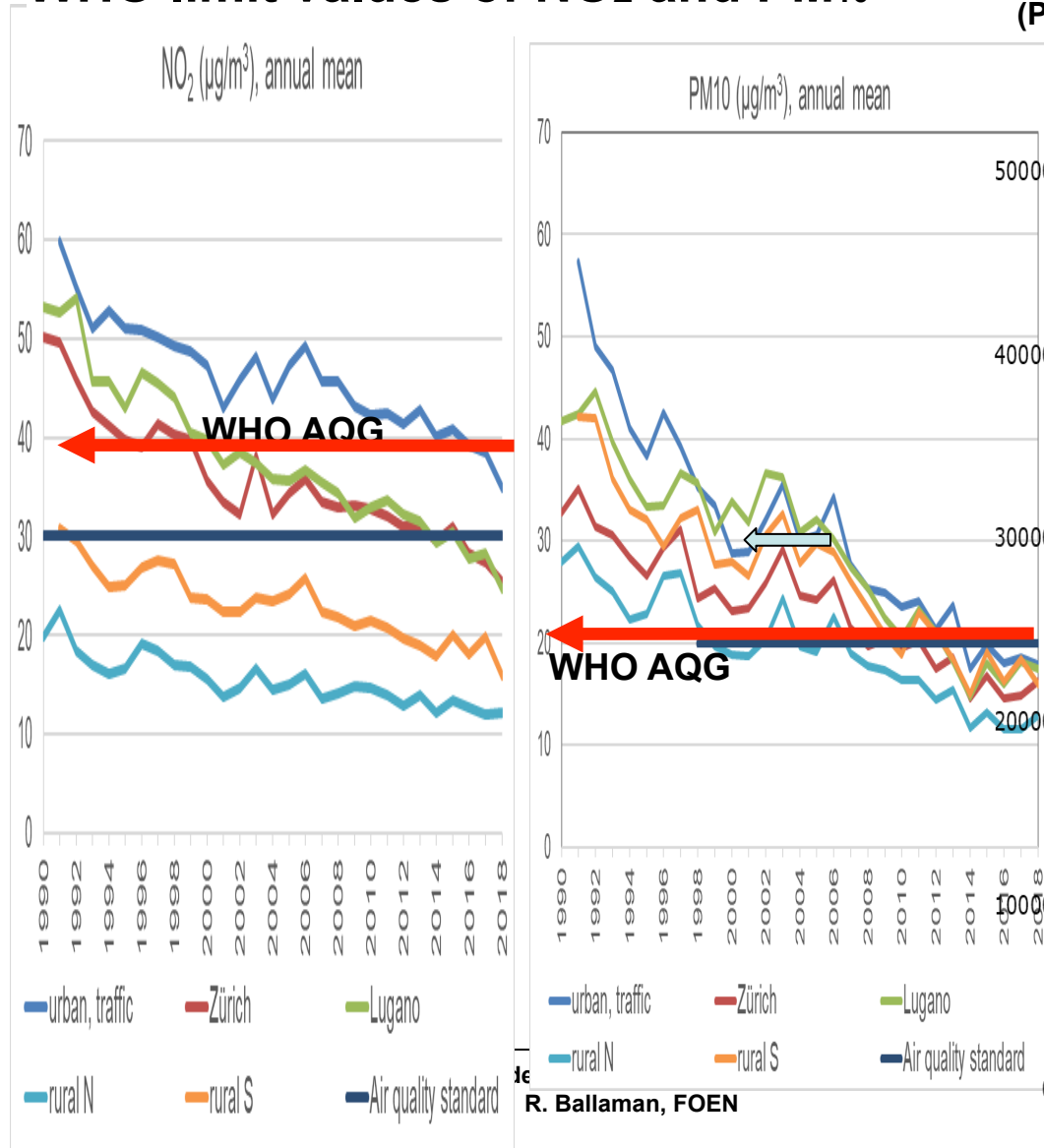
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# Clean air policy priorities under a global health perspective

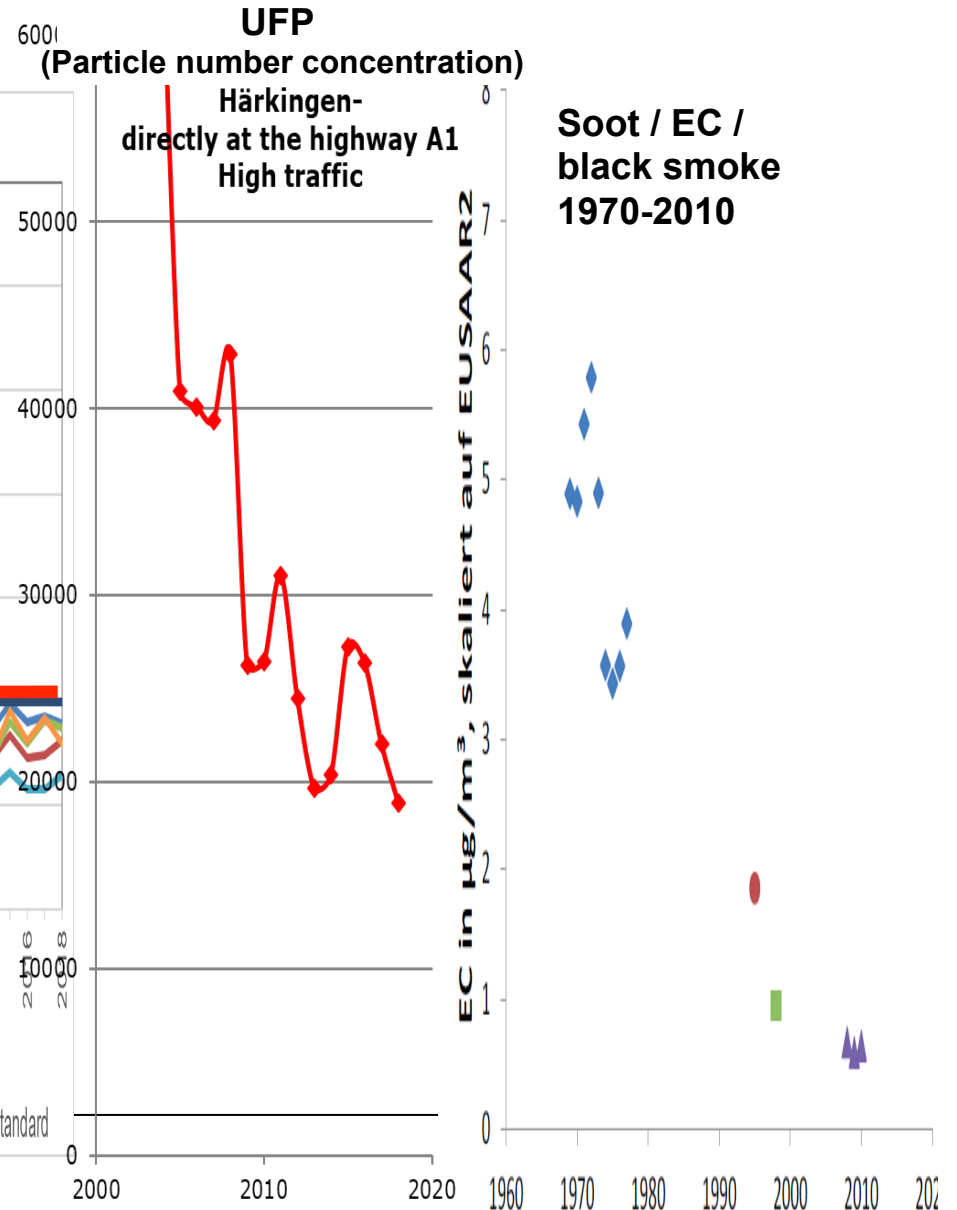
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# Clean air policies WORK!

**ALL Swiss monitoring stations  
(also near traffic) comply with  
WHO limit values of NO<sub>2</sub> and PM<sub>10</sub>**



# Strong decline of ultrafines and of black smoke (soot) – even at highway hotspot!



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**Konzern-  
verantwortungs-  
initiative**

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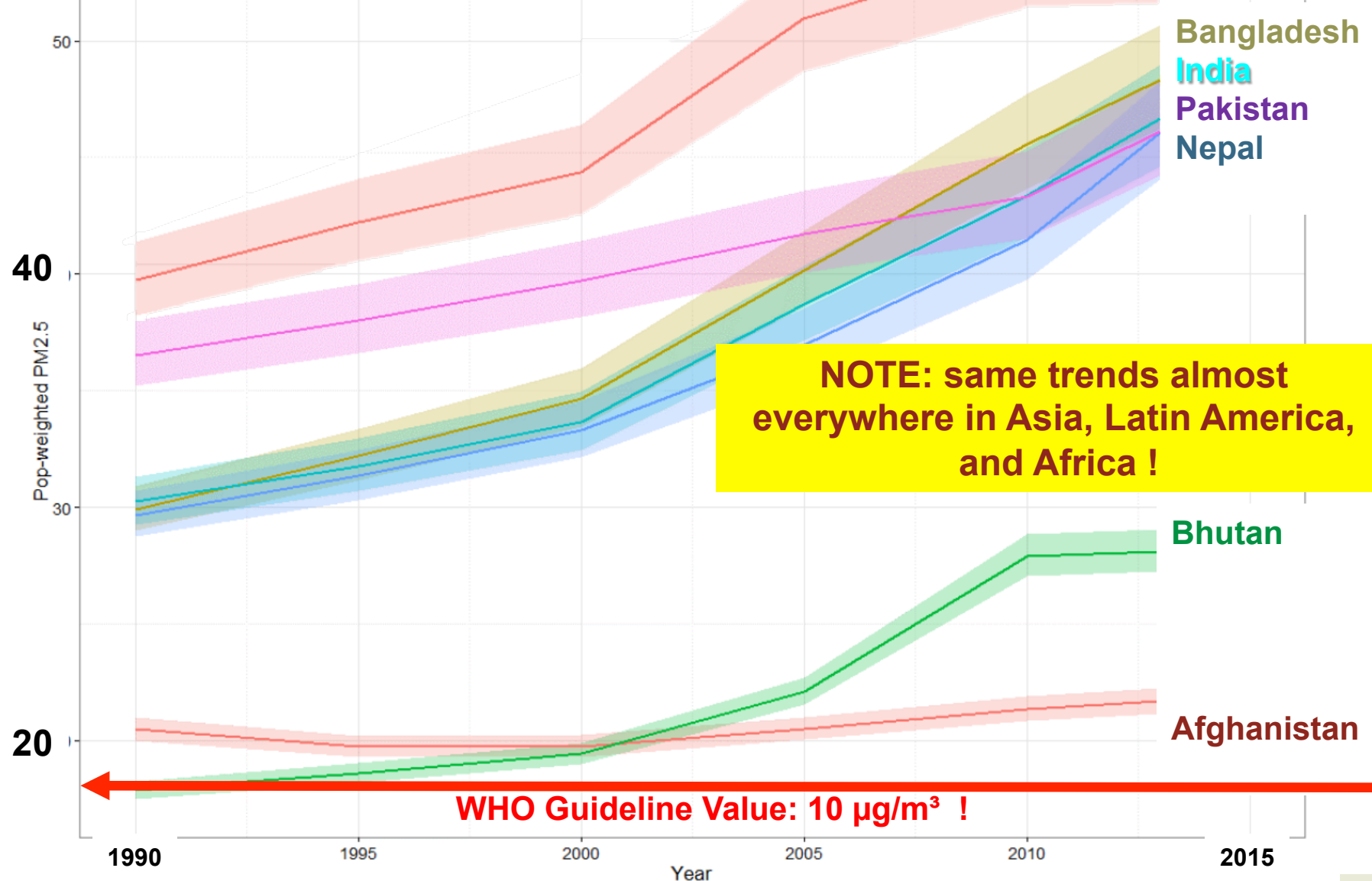
Konzernverantwortungs-  
initiative: Zum Schutz  
von Mensch und Umwelt

[Jetzt spenden](#)



# Highly polluted countries get worse!

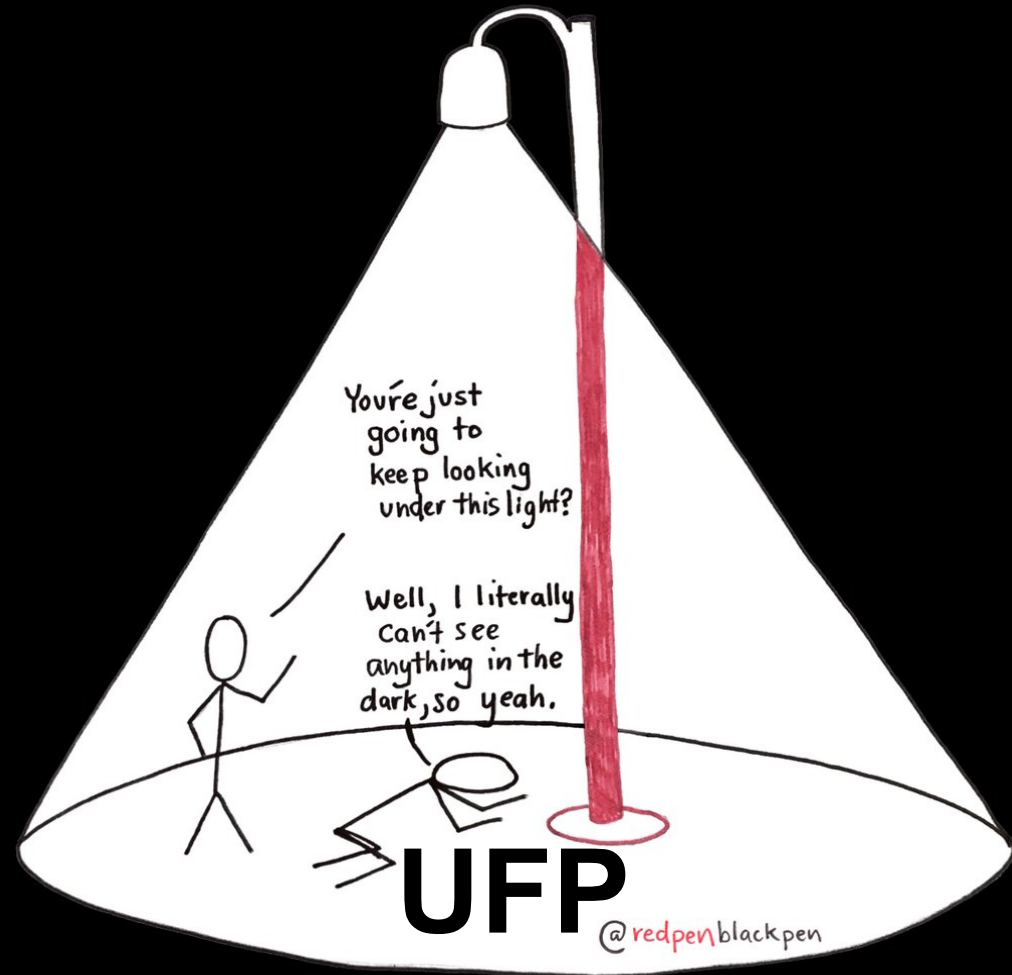
Annual fine PM<sub>2.5</sub>



Figures: adapted from Brauer et al. ES&T 2016

# Clean air policy priorities under a global health perspective

1. Stand up against FAKES, HYPES, and fabricated «DOUBTS» about the health effects of NO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub> and air pollution in general
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**Thank you !**

Schweizerische Ärztezeitung, Juni 2019, on-line

# Die Rolle der Luftschadstoffe für die Gesundheit

Annette Peters<sup>a</sup>, Barbara Hoffmann<sup>b</sup>, Bert Brunekreef<sup>c</sup>, Nino Künzli<sup>d</sup>, Meltem Kutlar Joss<sup>e</sup>,  
Nicole Probst-Hensch<sup>f</sup>, Beate Ritz<sup>g</sup>, Kurt Straif<sup>h</sup>, H. Erich Wichmann<sup>i</sup>