

Foreword

For a long time developing and applying per- and polyfluoroalkyl substances (PFAS) simply was a great success story, by now it became a cautionary tale of human ingenuity and blind faith in progress. Like many of the greatest environmental challenges of our time, PFAS meanwhile is a reminder of unintended consequences of human inventions when thorough information and system understanding is missing. Unnoticed for decades these so-called "forever chemicals" have penetrated into every corner of our lives - our water, our air, our food, and our bodies. The ubiquitous presence of PFAS has kind co-created the term triple crisis (climate change, biodiversity loss and environmental pollution) and thus the global debate about the future of our planet.

While we aim to improve our understanding regarding the complexities of PFAS contamination, we find ourselves at a crossroads. Do we continue down a path of denial, ignoring the mounting evidence and the anxiety from affected communities? Or may we seize such a pivotal moment, pool collective expertise and find resolve to chart a new course - one that prioritises the health of our people, the integrity of our ecosystems and the fabric of our world?

This book represents a critical step forward. Its authors have endeavoured to illuminate the darkness of PFAS pollution, casting a light on the mechanisms of harm, the pathways of exposure, and the analytical challenges that stand in our way. Through case studies, technical exploration, and policy analysis, they provide a comprehensive roadmap for understanding and confronting this crisis. But this book is not merely an academic treatment of a complex subject. It is a call to action—a clarion call to policymakers, industry leaders, academics, and the general public alike. It invites us to engage with the possibilities and challenges of a post-PFAS world, to imagine the future we want to create, and to mobilize the knowledge, creativity, and determination required to bring it to life.

Assuming our planet and environment close to tipping points, we can choose to view PFAS like a curse of overshooting planetary boundaries, accepting it as a constant reminder of failure, irreversibility and our neglect. Or it is 'kairos' - the very right moment - for taking opportunity to rewrite the story of our relationship with the environment, to prove commitment to sustainability, and to forge a brighter, safer future for ourselves and for generations to come.

Beyond brilliant knowledge, this book offers not only a beacon of hope. Overcoming major challenges can succeed. Mankind wanted to fly to the moon. US President Kennedy justified the decision in 1962 with the words 'we don't want it because it's easy, but because it's hard'. PFAS were one of the prerequisites to get out to universe

and likewise this book can be an impetus to think systemically and comprehensively, to demonstrate creativity and resilience, together and in awareness of the limits of our planet.

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