

BOOK REVIEW

A POISON LIKE NO OTHER BY MATT SIMON

EVERYWHERE AND UNGOVERNED: MICRO PLASTICS, LAW, AND THE UNFINISHED ARGUMENT OF A POISON LIKE NO OTHER

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What this Review Asks

This book, *A Poison Like No Other: How Microplastics Corrupted Our Planet and Our Bodies* by Matt Simon, is not a legal document. It's science reporting; a product of the field visits to sampling sites in the atmosphere and interviews with toxicologists, not case histories or legislation. But the book's argument comes down to a legal question (although the question isn't always stated that way): Can such a diffuse pollutant, so chemically anomalous and so completely integrated into consumer life be controlled by the means already available to democracy? As a science writer at *Wired*, Simon follows microplastic particles to the ocean, to soil, to the atmosphere, to humans' blood, lungs, and placentas, and then in a fifth chapter, poses the question: "What can be done about it? His response, which comes largely not from his analytical voice, but from the voices of scientists and advocates he interviews, is unequivocal: voluntary measures and individual behavior change is not going to address a problem this large, and its only binding regulation that can work, not consumer regulation. Judith Enck, a former EPA regional administrator, explains to him that "individual consumer action, although good, is insufficient to alter the path¹. "This is a systemic issue"².

Which is exactly why it is not a lawyer's claim that is to be taken seriously. It is an empirical conclusion, grounded in the fact that the recycling campaigns promoted by the plastic industry over the past 40 years have had little effect on its use of plastics, and that the only way to make a difference is to catch pollutants at the source, in this case, at the point of production. This review assumes that is what Simon will do when he reads the book. It asks whether the book

¹ Matt Simon, *A Poison Like No Other: How Microplastics Corrupted Our Planet and Our Bodies* 167 (2022).

² *Id.*

has the right diagnosis of the nature of microplastic pollution, where regulation is most needed, where it is not, and whether the book's diagnosis withstands the test of the regulatory experiments already underway, such as Extended Producer Responsibility in India pursuant to Plastic Waste Management Rules and the current negotiations over a binding UN treaty on plastic pollution that has been stalled. The book has been released in 2022. Both of those live examples, four years later, indicate that Simon's biggest concern, that industry will continue to discover new methods to claim reform when it's actually "just a different way of doing it" was both understated and correct.

Scope of Indictment

The organization of the book is organized by the particle, not by a chapter-by-chapter table of contents taken from a textbook. Plastic's material history is explored in Chapter 1, beginning with the invention of celluloid in 1869 as a substitute for billiard balls made of ivory and continuing through the postwar era, when plastic was linked to cheap oil³. Chapters 2-4 then take the reader with microplastics to the sea, the land and the air, with the final chapter, 5, posing the question of what to do. It's a conscious decision: Simon wants the reader to experience the pollution on all media before he asks them what to do⁴.

The first part of the project is set in motion with the first scene. Simon climbs Beaver Mountain in Utah with the biogeochemist Janice Brahney to see the atmospheric sampling buckets behind her 2020 Science paper⁵, "Plastic Rain in Protected Areas of the United States," which calculated that the equivalent of 300 million plastic water bottles falls each year on just 6 percent of the United States' land area⁵. The image is repeated throughout the book; plastic isn't just trash lying all around us in groups we can see, it's a contaminant that's now become part of the water cycle, which is impossible to prevent and no different from dust or pollen. It is a real interpretive piece for Simon's selected frame: "plastic rain is the new acid rain"⁶. Finally,

³ Simon, *supra* note 1 (Part I), at 9–11.

⁴ Mary Kate Robbett, *Imitation Ivory and the Power of Play*, Smithsonian Nat'l Museum of Am. Hist. (2018). ⁵ Am. Chem. Soc'y Nat'l Historic Chem. Landmarks, *Bakelite: The World's First Synthetic Plastic* (n.d.); Joseph L. Nicholson & G.R. Leighton, *Plastics Come of Age*, Harper's Mag., Aug. 1942; *Throwaway Living: Disposable Items Cut Down Household Chores*, Life, Aug. 1, 1955.

⁵ Simon, *supra* note 1 (part i), at 1-2

⁶ Janice Brahney et al., *Plastic Rain In Protected Areas of United States*, 368 Science 1257, 1257(2009)

acid rain was resolved by controlling the emissions at their source, in this case, by controlling emissions of sulphur dioxide from power plants, instead of asking people to carry umbrellas. It frames the book's argument to the reader without Simon making it explicitly.

In Simon's account, it's not only the distribution of microplastic that makes them so special but their chemical makeup. Plastic polymers represent a group of more than 10,000 chemicals, of which a quarter are deemed to be hazardous, and when the microplastic particle is transported through water, soil, or air it carries any pollutants, bacteria, and viruses that are already in the environment⁷. Almost nowhere in the book does Simon try to be more poetic than in using the term "a many-headed petrochemical hydra" instead of a "monolith" the few times that he does, it's not just a pretty saying, it reflects the truth that regulating "microplastic" as one category is a category error, since it could be a bag fragment, a polyester Fiber, a tire particle, or even a cosmetic microbead that may share almost nothing chemically with the others beyond its polymer backbone.

The chapters on land and air provide the book's most tangible evidence. In Chapter 3, Simon traces the two and a half years it took the University of Washington researchers to isolate one specific chemical from the tires, 6PPD-quinone, as the cause of the mysterious mass die-offs of coho salmon in Pacific Northwestern streams following rain⁸⁹. This is a chapter of detective work and the best example in the book of the slow pace of toxicology, compared to the rapid pace of industrial chemistry invention¹⁰. In one of the few moments of engagement with a non-Western river system, the same chapter references a 2021 study by University of Plymouth scientist Imogen Napper that estimates microplastic particles are being released into the Bay of Bengal (Bangladesh) by the Ganges up to 3 billion every day ¹⁰(p. 80; Napper et al. 2021), a study this review revisits in Part IV. The chapter goes on to examine the body, the effects of endocrine-disrupting chemicals (EDCs) that are emitted from plastic, and their effects on hormone signalling, even at low levels of exposure, a pattern toxicologist once thought of as a

⁷ Simon, *supra* note 1 (Part I), at 5.

⁸ Zhenyu Tian et al., A Ubiquitous Tire Rubber-Derived Chemical Induces Acute Mortality in Coho Salmon,

⁹ Science 185, 185 (2021); Markus Brinkmann et al., Acute Toxicity of the Tire Rubber-Derived Chemical 6PPD-Quinone to Four Fishes of Commercial, Cultural, and Ecological Importance, *Envtl. Sci. & Tech. Letters* (2022).

¹⁰ Imogen E, Napper et al., The Abundance and Characteristics of Microplastics in Surface Water in the Transboundary Ganges River, 274 *Envtl. Pollution* 116348 (2021)

"dose makes the poison" effect¹¹. The percentage of people that test positive is 90%-99% of the global population¹².

An American book about a planetary problem

This book is really a translation. The reader experience of microplastic pollution is a very hard one to impart, as it lacks a single dramatic image to compare to, say, an oil-slicked bird, and the damage is probabilistic and slow as opposed to being acute. Simon does this in the main primarily by keeping himself well-informed and letting the unguarded moments do the emotional work, and by not creating any drama for himself. What the hell, there's so much plastic in here"¹³, Brahney says, as she looks at the samples, evokes more than any statistic ever could, because it's a scientist's honesty and not a journalist's exaggeration. The same restraint is evident in Simon's treatment of uncertainty, with an unvarnished statement by toxicologist Joost Smit left in place at the end of the chapter – that "the effects of microplastics on human health, we maybe know 1 percent of it"¹⁵. That's a virtue in science writing, given the field's relative newness, where the urge to attribute causation is ever present.

However, the book is also the weakest in its arguments because of this dependence on quotation. He very rarely enters the fray to adjudicate competing scientific claims, or to flag where correlation is reported as if it were causation; he largely does not intervene in the way the interviewees frame things, except to let their framing stand as the book's framing. The chapter on human health is the unambiguous illustration: "Since the mid-1970s, there is a correlation between the increase in production of plastics and the increase in obesity rates; obviously there are many other factors in the equation of obesity, but that is the clear connection in this chapter"¹⁴. A more critical approach would have emphasized the extent to which the

¹¹ Jodi Flaws et al., *Plastics, EDCs, and Health: Authoritative Guide* Endocrine Soc'y (2020).

¹² Laura N. Vandenberg, *Exposure to Bisphenol A in Canada: Invoking the Precautionary Principle*, 183 *Can. Med. Ass'n J.* 1265 (2011).

¹³ Simon, *supra* note 1 (Part 1), at 3. ¹⁵

Id. At 154

¹⁴ Kurunthachalam Kannan & Vimalkumar Krishnamoorthi, *A review of Human Exposure to Microplastics and Insights into Microplastics as Obseogens*, 12 *Frontiers in Endocrinology* (2021); *supra* note 1 (part 1), at 159-61

epidemiologic evidence he draws upon can support such a conclusion; instead, he has wrapped qualification into an undertone which undermines it.

The interaction between law and policy within the book is also uneven; compelling on the mechanisms, weak on systems that would be needed to implement them. On the perverse economics of plastic recycling, Simon tells it like it is, with interviews of TerraCycle's founder, Tom Szaky, and California water regulator, Scott Coffin, explaining why, with no policy adjustment, virgin plastic will be cheaper to make than recycled plastic to collect and process¹⁵. When it comes to prescription, he's not as convincing. His suggested solutions include a per-item plastic tax, a requirement for washing machines to have microfiber filters, an extended producer responsibility scheme and a phase down on virgin plastic¹⁶. they are all independently credible and all based on real existing policy proposals, but the book never considers what happens to them when they come into contact with the political economy, they've just spent 150 pages describing: an industry that funded decades of misleading recycling messaging¹⁷, that ships waste to the country that can burn it most cheaply²⁰ that, as Simon himself states, sees the substitution of one untested bisphenol for another as compliance with a ban¹⁸. At the end of the chapter the disease is named once more but a hint is given at a mechanism of cure.

The book is also more American than its subtitle “Our Planet and Our Bodies” promises. It relies almost exclusively on US and European university and agency resources, its policy focus is on the EPA, California, and the global south is largely a place where exported waste ends up, the site of open-pit burning, and home to subsistence fishers who catch “more bottles and bags than seafood.”¹⁹ This is no gigantic oversight. Indian researchers recording Indian rivers and coastlines provide some of the book's more dramatic evidence (the study of the Ganges in 2021, an analysis of beach-pollution in Puducherry, both cited in the chapter notes, from Dowarah and Devipriya²⁰, but the book never asks what (if anything) regulates Indian rivers

¹⁵ Simon, supra note 1 (Part I), at 159–61.

¹⁶ Simon, supra note 1 (Part I), at 157, 161–164.

¹⁷ Simon, supra note 1 (Part I), at 157. ²⁰

Simon, supra note 1 (Part I), at 160.

¹⁸ Alexandros G. Asimakopoulos et al., Migration of Parabens, Bisphenols, Benzophenone-Type UV Filters, Triclosan, and Triclocarban from Teethers and Its Implications for Infant Exposure, 50 *Envtl. Sci. & Tech.* 13539, 13539 (2016); Simon, supra note 1 (Part I), at 139–40.

¹⁹ Simon, supra note 1 (Part I), at 165.

²⁰ Kaushik Dowarah & Suja P. Devipriya, Microplastic prevalence in the beaches of Puducherry, India and its correlation with fishing and tourism/recreational activities, 148 *Marine Pollution Bull.* 123, 123 (2019).

and coastlines, or what it would mean for the book's prescriptions to be implemented beyond the regime of a rich federal democracy. Such a thing, it is fair to leave to other book authors that cover four continents of science. However, a review that might go beyond the book's frame should not ask the question that Simon doesn't: what does "turning down the plastic tap" actually mean in a jurisdiction that has actually done so?

Upstream in Practice: EPR, Enforcement.

India is a helpful laboratory for Simon's prescriptions, because it has already experimented with some of them: the warnings of both the book and of the Indians themselves about capture and enforcement apply particularly to it. India's Plastic Waste Management Rules (PWMR), which were notified in 2016, were significantly modified in August 2021 and again in February and July 2022, before being implemented nationwide on 1st July 2022, banning the manufacture, import, sale and use of nineteen items identified as low-utility, high litter (MoEFCC 2022)²¹, such as earpicks with plastic sticks, cutlery, thermocol decoration, and straws. ²²The ban is accompanied by a system called Extended Producer Responsibility (EPR), which was notified in February 2022, that puts a financial and logistical obligation on the producers, importers and brand owners to collect and recycle the plastic packaging products they put on the market, which will be facilitated through a centralized portal managed by the Central Pollution Control Board (MoEFCC 2022; Saikrishna & Associates 2023)²³. This, more or less, is the move that Simon has been campaigning for, to take the burden of responsibility away from the end-user and impose it on the producer, with the threat of punishment instead

²¹ Plastic Waste Management (Second Amendment) Rules, 2022, Ministry of Env't, Forest & Climate Change (India), notified July 6, 2022.

²² Extended Producer Responsibility Guidelines for Plastic Packaging, Ministry of Env't, Forest & Climate Change (India), notified Feb. 16, 2022.

²³ Plastic Waste Management (Amendment) Rules, 2021, Ministry of Env't, Forest & Climate Change (India), notified Aug. 12, 2021.

of exhortation²⁴. Judith Enck's formula is so succinctly explained by the EPR statute's stated logic: "adopt effective laws and then strictly enforce them"²⁵

However, the book's own analysis of the economics of recycling predicts exactly where such a regime will go wrong, and India's experience confirms it. Simon's central point is that recycling fails not because collection is technically impossible but because it isn't profitable, low value, multilayered plastics are the ones that get dumped or burned rather than processed²⁶. This describes India's plastic waste stream with some precision. Independent estimates of the EPR regime suggest that enforcement is inconsistent, monitoring is not robust enough at ground level, and there are large discrepancies between the volume of plastic packaging producers report and the volume collected and recycled²⁷ (as per data from the CPCB 2022–23, as mentioned in Operation Shuddhi 2026). The statute is in place, but the compliance structure to make it stick is lagging a pattern Simon describes all over the rest of the book: You can have a good law on the books, but if you don't have a good law at the point of enforcement, you're just not going to get it.

It is also apparent on the international stage, on a much greater scale, in the current negotiations towards a UN Global Plastics Treaty, which Simon had not spoken about during his time writing the book, but which is currently the most obvious, practical proof of his core argument that only binding, production-side legislation can solve the problem. In March 2022, the UN Environment Assembly decided to negotiate a legally binding instrument for a full life cycle approach to plastic, with a view to completing the process by the end of 2024²⁸ (UNEP, n.d.). That's now the second time that a meeting ends without an agreement: in late 2024, it took place in Busan, and a second one in Geneva in August 2025 had no result — reportedly, over exactly the same divide as Simon's book outlines, between a treaty aimed at virgin plastic production, and one to tackle waste management and recycling (Packaging Europe 2026; IISD

²⁴ Saikrishna & Assocs., MoEFCC Notifies the Plastic Waste Management (Second Amendment) Rules, 2022 (Jan. 2023).

²⁵ Simon, *supra* note 1 (Part I), at 167.

²⁶ Simon, *supra* note 1 (Part I), at 159–61.

²⁷ Operation Shuddhi, Single-Use Plastic Ban in India: Rules, Impact & The Road Ahead (2026) (citing Cent. Pollution Control Bd., unpublished data, 2022–23).

²⁸ U.N. Env't Programme, Intergovernmental Negotiating Committee on Plastic Pollution, <https://www.unep.org/inc-plastic-pollution> (last visited Aug. 1, 2026).

2026)²⁹. In October of 2025, the committee's chair stepped down, and as of this writing, the negotiating body has just elected a new chair in a one-day procedural session in Geneva in February 2026³⁰, but substantive negotiations have yet to resume (IISD 2026). Regardless of one's views on the treaty's prospects, the fact that it has now been stuck at that very same point is a surprise and in some ways a vindication of the book's thesis that the most difficult battle is always going to be over production levels and not over cleaning up downstream pollution and a warning not to read the EPR rules of India or any national framework as a sign of the ease with which the harder international issue is getting solved.

The export of plastic waste from rich to poor countries is a regulated activity, at least in theory (as is most plastic waste trade under Basel, which came into force in 2019 and brought much plastic waste under Basel's "prior-informed-consent" (PIC) regime for the trade of hazardous waste), and is a regulated activity with a connection the book hints at but doesn't pursue, the trade of hazardous waste from rich to poor countries, which is a perverse inversion of colonialism, as Simon characterizes it³¹ and of which India, as a Basel party, is bound by the rules³². The Basel amendment seems to be precisely the sort of upstream, tradeside intervention this book's logic demands and precisely the sort of intervention this book doesn't mention, which is highly relevant, as it is focused primarily on the domestic and American scene, and despite the scope of its scientific digression, ultimately very domestic and American.

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Conclusion

As a science journalism for the general reader that renders an invisible, slow-moving crisis legible and urgent, *A Poison Like No Other* succeeds, and succeeds unusually well. But rather than building the book around policy debate or industry profiles, Simon's choice to follow the particle through all media, land, sea, air and body is correct for a subject so ubiquitous that its

²⁹] Int'l Inst. for Sustainable Dev., INC-5.3: Where the Global Plastics Treaty Talks Stand, and Why This Meeting Matters (Feb. 2026).

³⁰ Taking Stock as Global Plastics Treaty Negotiations Begin at INC-5.3, Packaging Europe (Feb. 2026).

³¹ Simon, supra note 1 (Part I), at 160.

³² Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, Plastic Waste Amendments, entered into force Jan. 1, 2021.

defining characteristic is its omnipresence. What's more, the book is also, admirably, honest about the limitations of current science, and fails to overstate the certainty that toxicologists have about health effects from human exposure to toxic chemicals, even when it might have been easy to write a more sensational book and it would have sold just as well. The book, however, is a legal reform brief, and a well-documented opening statement more than a case. It accurately recognizes that a problem of this magnitude can only be tackled through a solutions package that is legal and financial and placed upstream, with producers, via EPR, production taxes and compulsory design standards. But it does not seriously engage with the mechanisms by which these laws get established as Simon himself reports, decades were spent by the same industry that he shows through his reporting to manufacture doubt about recycling³³ and it simply switches out one untested chemical for another when a particular compound is outlawed³⁴. Nor does it seem far out of the United States and Western Europe to find evidence at a time when some of the more instructive experiments such as the EPR rules in India, the stalled UN treaty process, the extension of the Basel Convention to plastic waste are taking place elsewhere and would have put the book's thesis under the same kind of stress that those regulations would have faced.

It's that friction, in fact, that has made the book right, in its weakest sense. The Indian ban on single-use plastics and the EPR system is in place more or less as Simon wrote in his last chapter and facing enforcement and economic challenges that Simon warned about in his chapter on recycling. In the global treaty he does not mention the output caps and downstream management was the issue on which it has stalled twice, and in his book the subject is considered to be decided in principle but ignored in practice. Four years later it's fair to say that A Poison Like No Other's science has proven to be sound, and its politics has been confirmed by events that it did not foresee. What the book is not conviction, but the tougher, more technical job of making conviction a hard enforceable law, a job that, in part, is being contested in Geneva and New Delhi as this review is written, with no resolution currently on the horizon.

³³ Laura Sullivan, *supra* note 6 (Part III); Simon, *supra* note 1 (Part I), at 157.

³⁴ Alexandros G. Asimakopoulos et al., *supra* note 10 (Part III) Simon, *supra* note 1 (Part I), at 139–40.