

16. A Manual for Moral Collectives: Our Shared Responsibility to End Plastic Pollution, Protect Human Health, and Advance Social Justice for All

James F. Keenan, SJ

In many ways this volume is the result of two volumes already published by the strikingly indefatigable pair of Public Health Professor Philip Landrigan and Theological Ethicist Andrea Vicini: *Ethical Challenges in Global Public Health: Climate Change, Pollution, and the Health of the Poor* and *The Rising Global Cancer Pandemic: Health, Ethics, and Social Justice*.¹ These two volumes set the stage for these scholars to face with other esteemed colleagues the specific challenge of global plastic pollution.

At Boston College, Landrigan is Director of the Program for Global Public Health and the Common Good, and Director of the Global Observatory on Planetary Health. From 2015 to 2018, he co-chaired the *Lancet* Commission on Pollution and Health, which found that pollution is responsible for an estimated nine million deaths per year, is closely linked to climate change, and is an existential threat to planetary health. Since 2019, he has chaired the Monaco Commission on Human Health and Ocean Pollution examining the links between ocean pollution and human health. From 2021 to 2023, he chaired the Minderoo-Monaco Commission on Plastics and Human Health, which examined plastics' impacts on human health across the plastic life cycle and formulated recommendations to guide drafting of the UN Global Plastics Treaty,

¹ See Philip J. Landrigan and Andrea Vicini, eds., *Ethical Challenges in Global Public Health: Climate Change, Pollution, and the Health of the Poor*, Global Theological Ethics in the World Church, vol. 1 (Pickwick Publications, 2021); Andrea Vicini, Philip J. Landrigan, and Kurt Straif, eds., *The Rising Global Cancer Pandemic: Health, Ethics, and Social Justice*, Global Theological Ethics in the World Church, vol. 2 (Pickwick Publications, 2022).

currently in development.² This recent position led to the conference at Boston College that this collection of essays captures.

Vicini is the Michael P. Walsh Professor of Bioethics and Chairperson of the Boston College Theology Department. He has taught in Italy, Albania, Mexico, Chad, and France and is co-chair of the international network Catholic Theological Ethics in the World Church,³ as well as a lecturer and member of associations of moral theologians and bioethicists in Italy, Europe, and the US. Vicini has been a leader in theological ethics, inviting scholars to form collectives to respond to the challenges of our times.

Like Landrigan, Vicini is a pediatrician. Together, in this collection they join Karen Bullock, the Louise McMahon Ahearn Endowed Professor in the Boston College School of Social Work and in the program on Global Public Health and Common Good. Still there is another colleague to recognize, Professor Summer Sherburne Hawkins from the Boston College School of Social Work. As the Associate Director for the Global Public Health and the Common Good program she partnered with Landrigan, Vicini, and Bullock and became the fourth member of the quadrumvirate who organized this conference. In these pages together they provide us a way of participating in the attempt to overcome plastic pollution.

Their ongoing legacy is to put into the hands of like-minded scholars the fundamental resources for social change. Moreover, their aim is not primarily to engage or motivate the singular student or scholar. Rather, because collective work is so urgently needed, this manual is for a shared learning, a shared deliberation, and a shared action program to reduce plastic pollution. The individual reader is invited to find other companions so as to work collaboratively with one another to answer the call for equitable protection from the ravages of plastic pollution.

² See Philip J. Landrigan, Hervé Raps, Maureen Cropper, Caroline Bald, Manuel Brunner, Elvia Maya Canonizado, et al., “The Minderoo-Monaco Commission on Plastics and Human Health,” *Annals of Global Health* 89, no. 1 (2023), doi.org/10.5334/aogh.4056.

³ See Catholic Theological Ethics in a World Church, www.catholicethics.com.

Therefore, do not put this manual away, rather share it with others so as to alert them and work with them to address the struggle before us. It is for this reason we publish it in an excellent online, no-cost series.

A Manual for Collectives Seeking to Overturn the Devastating Impact of Plastic Pollution

These essays provide readers with a manual to help groups move toward organizing for a social change regarding the production and use of plastics. The concluding chapter of this collection, the conference's own declaration, "Our Shared Responsibility to End Plastic Pollution, Protect Human Health, and Advance Social Justice for All," was signed by conference delegates just before the Boston College international Conference on October 4–5, 2024: "Joining Science and Theology to End Plastic Pollution, Protect Health, and Advance Social Justice," one month before the much anticipated fifth and final round of negotiations for the United Nations Global Plastics Treaty.

That session lasted until December 1st without closure and established a second meeting for the fifth resumed session from August 5–14, 2025 in Geneva, Switzerland, after the previous meeting in Busan, South Korea, ended without a final agreement.

The Declaration helpfully summarizes their eight major findings. Their first finding notes that "*Plastics cause disease, disability, and premature death at every stage of their life cycle—in production, use and disposal.*" With more than sixteen thousand synthetic chemicals that are in plastics and leak out, the cost of the diseases that they cause "result in annual costs of \$675 billion in the USA and \$1.2 trillion globally." Their last finding claims that "*Relentless increases in production are the main driver of plastic's worsening harms.*" This is because "annual plastic output has grown more than 200-fold—from two million tons in 1950 to over 400 million tons today." They add: "Production is on track to double by 2040 and triple by 2060."⁴

⁴ See Chapter 15 in this volume.

The Declaration then makes seven notable and easy to remember recommendations from limiting production and recognizing that plastics recycling is generally ineffective to funding the treaty's implementation and subsequent monitoring. The three-page Declaration is a *Magna Carta* on the astonishing harm of plastic production.

This project and its authors want to make you capable of working with us toward subduing this global threat. Therein each of the essays provide the foundations for that collective endeavor.

Safeguarding Human Health against Plastics and Petrochemicals: A Scientific and Moral Imperative

The second chapter is without a doubt the finest collective report explaining why plastics production is so morally problematic. It is impeccably documented. With Landrigan joining a team of four members of the Minderoo Foundation and led by Sarah Dunlop, they present a dense but highly accessible essay laced with memorable phrasing that should be repeated by readers wanting to summon others in a call to respond. Here, I highlight ten of them; each of them has remarkable insights.

1. "Plastics are the signature material of our age."
2. "These harms are not equitably distributed."
3. "These groups did not create the plastics crisis. They do not profit from it. They lack the power to address it. Yet they suffer its most severe consequences. They are victims of social and environmental injustice on a planetary scale."
4. "Plastics are complex manufactured chemical materials."

5. “Plastic production is highly energy-intensive, and virtually all of the energy required for plastic manufacture comes from fossil fuel combustion.”
6. “Plastic production workers, plastic waste pickers, and residents of vulnerable ‘fenceline’ communities living closely adjacent to production facilities suffering the most.”
7. “Plastic production is associated with extreme exposures that occur during catastrophic failures of the plastic production process, such as fires and explosions, oil spills, and chemical spills.”
8. “An estimated 350 million tons of plastic waste are produced globally each year, and an estimated six billion tons, seventy-five percent of all plastic ever made, pollute the planet. This waste causes extensive contamination of the environment, including the ocean, and it threatens the lives of two billion people worldwide with eleven million waste pickers lacking safe workplaces and protective equipment.”
9. “Plastic recycling, known variously as chemical recycling, mechanical recycling, enhanced recycling, pyrolysis, and upcycling is highly ineffective. Despite exaggerated claims by the plastic industry about the effectiveness of recycling, less than ten percent of all plastic is recycled globally. Plastic recycling and reuse lags far behind paper, glass, and aluminum recycling. Toxic chemical content and complexity are the major impediments.”
10. “Residential proximity to a landfill increases cancer risk.”

Three subsequent claims merit even more attention. First, plastic chemicals are already in us. Indeed, the following claim is accompanied by six footnotes and twenty-five lines of documentation:

Plastic Chemicals Are Ubiquitous in the Human Body. Plastic chemicals are found in seminal fluid, follicular fluid, amniotic fluid, cord blood, meconium, children's and adult's blood and urine, breast milk, and hair, as well as in solid tissues such as liver, brain, breast tissue, and adipose tissue. National biomonitoring surveys detect several hundred plastic-associated chemicals in the bodies of virtually all humans of all ages.⁵

Second, they highlight the astonishingly unethical impact of governmental subsidies for plastic production:

The human health costs resulting from exposures to plastic-associated chemicals are much larger than the subsidies provided by governments to plastic producers. This creates an ethical imbalance in which plastic producers and fossil fuel corporations are rewarded economically for creating harms to health that fall disproportionately on the poorest and most vulnerable members of societies.⁶

Third, they articulate the hope of a treaty on the horizon:

The UN Environment Assembly adopted a historic resolution on March 2, 2022, to develop a global plastics treaty. The stated goal of this treaty is to reduce plastic pollution, including ocean pollution and microplastics, across the entire plastic life cycle. Treaty negotiations are on a fast track. To date, an Intergovernmental Negotiating Committee (INC) has met five times with a sixth meeting scheduled for 2025. A plastics treaty that prioritizes protection of human health will contain two key provisions—a cap on production of new plastics and strict regulation of plastic-associated chemicals. More than one hundred nations, the High Ambition Coalition, support these provisions in the treaty negotiations. However, the plastics and petrochemical industries

⁵ See pages 34–35 in this volume.

⁶ See page 42 in this volume.

as well as major petrostates, led by Saudi Arabia and Russia, oppose these provisions. Negotiations will continue in 2025.⁷

The chapter ought to be frequently invoked and cited. It is magisterial, a model expression of a method to offer empowering information for a daunting collective project. Wisely, the authors conclude echoing Pope Francis' own advocacy.

I think of this first chapter as the head of this manual; it is filled with information: a veritable executive summary of the challenges before us. The remaining chapters provide resources in the fight to advocate for the treaty and the more enduring issue of reducing plastic production and its attendant inequities. These address two different needs: first, needed ethical argumentation. Here are three essays that capture the heart of this manual. These essays move and enlighten us with frameworks for organizing the foundations of our responses. The second are four pieces that provide a roadmap, and these are the legs of the manual. They take us collectively on our way.

Ethical Foundations for Our Responses

Three ethicists make singular contributions in this work: Willis Jenkins from the University of Virginia, on religious ethics and environmental humanities, Christina G. McRorie on economic justice and moral agency, and Andrea Vicini on Catholic social teaching.

The intrepid Jenkins has long guided fellow ethicists in understanding and engaging the environment. Now Jenkins invites us to encounter our own plasticity. He begins his empowering reflection, "In early Christian thought the word 'plastic' often referred to the human being. From the Greek verb *plassō* for molding and making, emerged a word for the quality of being able to be molded: *plastikos*—the quality of being formable by the intent of another." He adds: "from the New Testament into the

⁷ See pages 45–46 in this volume.

nineteenth century, a primary referent for ‘plastic’ in Christian theology was the human interior, transformable before the creativity of God.”⁸

Jenkins notes that today plastic is the name of “a scourge, a pervasive light that itself seems to be altering lifeworlds” and wonders whether “plastic will become the signature geological evidence of an epoch of irresponsible anthropogenic influence: the plasticene.”⁹ This radical shift from something of promise to now an existential threat prompts us to stay with the original meaning of the word. Jenkins retrieves this original notion of plastic wherein we are “molded by God into responsibility for all one’s relations.”¹⁰ He encourages us to “become more plastic.”¹¹

He also suggests that by becoming more plastic, we might confront our own colonial inclinations that underlie the distribution of the chaos of plastic and the injustices that they promote. He notes that by confronting that mentality, we might not only make ourselves more plastic to address our challenges, but we also might be able to undo the belief that plastic pollution is inevitably to become worse. Indeed, by recognizing how historically problematic we were in the past, we might learn how to unravel the scourge of the present. He concludes with five tactics, the last being to recognize the agential “rights of rivers and oceans.”¹²

Like Jenkins, McRorie focuses on the fact that “it seems undeniable now that the destructive consequences of our overuse of plastics are many, and that these are distributed unequally, with the heaviest burdens borne by those with least power and privilege.”¹³ Still, like Jenkins, McRorie focuses on human agency to respond to this crisis and looks on the challenge “as an economic question, seen in light of the principle of the preferential option for the poor.”¹⁴ Again, like Jenkins, McRorie insists

⁸ See page 67 in this volume.

⁹ See page 67 in this volume.

¹⁰ See page 69 in this volume.

¹¹ See page 69 in this volume.

¹² See page 80 in this volume.

¹³ See pages 84–85 in this volume.

¹⁴ See page 83 in this volume.

that to get away from our colonial mentality then, we need to find ways to “include empowering *their* agency. This keeps this principle from becoming paternalistic and mere charity: to truly have an enduring commitment to the dignity of the most vulnerable means acting to empower them as agents in their own lives and following their lead when it comes to solving problems that affect them.”¹⁵

McRorie recognizes that some economists, indeed, want to face the global reality that top-down decisions by those who manage market incentives are necessary and that we should work for laws that accomplish this. But she also sees the present predicament as at once a challenge and yet an invitation to a transformative and more just economics. She raises up Elinor Ostrom’s Nobel-prize winning work on how local communities governed “communal resources such as fisheries and forests *without* having these managed by a centralized state authority.”¹⁶

Like Olstrom, McRorie prompts us “not to think that the only fix for social dilemmas is to have the state itself restrict self-interested behavior in markets but to also focus on institutions” that “bring out the best in humans.”¹⁷ With that prompt in mind, McRorie highlights other ways before and beyond the state that communities can exercise and practice through a true economically just moral agency. In her argument, it seems to me, she sees the present predicament as a kenotic moment to understand and construct more local, transparent, and equitable economic structures that fit the contours of local societies.

As McRorie invokes the option for the poor as an indispensable hermeneutical key for morally just local and national economies, Andrea Vicini invites a full embrace of the Catholic social justice tradition. In his refreshing essay, Vicini raises up the necessary virtue of social trust as indispensable for any reforms. In advancing three necessary responsive strategies, he first highlights the need to pair personal and social agency by

¹⁵ See page 84 in this volume.

¹⁶ See page 88 in this volume.

¹⁷ See page 89 in this volume.

highlighting the virtues and the practices of prudence, justice, and solidarity. Echoing McRorie's concerns on agency, Vicini proffers virtues that not only can connect and make possible more responsible social agency but also inflame a social trust that is desperately needed today.

Vicini then insists on a vigilance for keeping in tension the political and the economic, echoing the core of McRorie's thesis. He concludes by interfacing the technological with the critical. Just as McRorie warns us against a belief that the state alone can change plastic pollution, so too Vicini warns us that "to presume that technology is *the* only solution and that technological fixes alone can respond to what affects human beings and the planet betrays what Pope Francis has called the 'technocratic paradigm.'"¹⁸ He proposes that we "articulate a critical assessment of technological developments and strengthen our social awareness and critical engagements, which might imply promoting environmentally sustainable alternatives and embracing forms of resistance to unquestioned uses of plastic products."¹⁹ He concludes arguing that "education and formation are integral to the ongoing task of empowering moral agents and fostering needed structural transformations and changes."²⁰ I would add that this collection of essays is precisely an instrument for promoting that education and formation.

Pathways Forward

With the conference report and three ethics essays as foundations for a response, we now turn to the four final essays that prompt us on our pathways to personally and collectively respond to the crisis of plastics pollution.

First, Margaret Spring, JD, a member of the Minderoo-Monaco Commission on Plastics and Human Health, and a co-author of its 2023

¹⁸ See page 105 in this volume.

¹⁹ See page 106 in this volume.

²⁰ See page 107 in this volume.

report, and Cindy Matuch, a Science-Policy Fellow, who works with Spring at the Monterey Bay Aquarium, provide a historical narrative of the advancement of the global treaty. They trace the five meetings starting with the first in Punta del Este Uruguay in March 2022, when “over 175 countries approved UNEA Resolution 5/14, which called for the development of an international legally-binding agreement to tackle plastic pollution, including in the marine environment.”²¹ We learn that “the specific mandate was to develop an instrument, based on a comprehensive approach that addresses the full life cycle of plastic and that would include both binding and voluntary approaches.”²²

Subsequent meetings in France, Kenya, and Canada “continued consideration of the key elements that would form part of a treaty text.”²³ Spring and Matuch explain the convergences and divergences in the pursuit of the treaty. The fifth meeting, held in Busan, Republic of Korea, from November 25–December 1, 2024, “was intended to be the final round of negotiations. However, while it brought several advancements, the meeting ultimately concluded without agreement on a final treaty text. Delegates agreed to reconvene in 2025 for a subsequent session.”²⁴

The authors “saw both significant progress and persistent challenges, signaling cautious optimism about the treaty’s future.”²⁵ Noting “the increased ambition displayed by a growing number of member states,” they reported that:

Over one hundred countries expressed support for the text’s proposals to reduce the production of primary plastic polymers in alignment with global targets. Additionally, ninety-four countries backed a declaration calling for legally-binding obligations to phase out the most harmful plastic products and chemicals of concern. Eighty-five members

²¹ See page 110 in this volume.

²² See page 110 in this volume.

²³ See page 112 in this volume.

²⁴ See page 113 in this volume.

²⁵ See page 114 in this volume.

supported a declaration referencing four key measures that would form part of an ambitious instrument.²⁶

With the expectation of a treaty in 2025, they see “that it may be two, three, or more, years between finalization of the initial treaty text and entry into force.”²⁷

The Reverend Mitchell C. Hescoc, President Emeritus of the Evangelical Environmental Network, provides a “moral roadmap for ending the global plastics crisis” and helpfully notes that “most attempts to mobilize Americans for a plastic-free future utilize language and value appeals that are inconsistent with conservatives’ core values.”²⁸

He argues that the possibility of change “depends on engaging existing faith and moral frameworks.”²⁹ He explains that “these frameworks must include children’s health (both unborn and born), the potential harm to future generations, business opportunities, efficient limited government action, and hope. Solutions must also include practical and meaningful individual engagement. Sanctity (the sacredness of life) and purity (morally untainted) are the top moral values for the conservative evangelical community.”³⁰ He adds, “meaningful communication and education in our community must focus on these two primary concerns—the best and most common messages for our community.”³¹

I found most instructive that for a community that depends on wisdom from Scripture alone, the argument for tending to the environment must invoke the bible. Specifically, Hescoc narrates the force of Colossians 1:16–20 (NIV):

²⁶ See page 114 in this volume.

²⁷ See page 118 in this volume.

²⁸ See page 122 in this volume.

²⁹ See page 127 in this volume.

³⁰ See page 127 in this volume.

³¹ See pages 127–128 in this volume.

For in him all things were created: things in heaven and on earth, visible and invisible, whether thrones or powers or rulers or authorities; all things have been created through him and for him. He is before all things, and in him all things hold together. And he is the head of the body, the church; he is the beginning and the firstborn from among the dead, so that in everything he might have the supremacy. For God was pleased to have all his fullness dwell in him, and through him to reconcile to himself all things, whether things on earth or things in heaven, by making peace through his blood, shed on the cross.

From this text, he argues that “Christians are not the owners of the Earth. The Earth, God’s creation, was formed by and for God, by and for Jesus. Unfortunately, too many Christians, especially evangelicals, do not understand the imperative to ‘work it and take care of it [the Earth].”³² Of course, the command to care for the Earth is from Genesis 2:15, God’s very first instruction to the human, the first task humanity given by God.

Hescox concludes noting again that the preeminent concern of conveying environmental threat by stressing its impact on our children.

The volume concludes with three religious salutations and a message from the Prince of Monaco to commend us on these pathways. From Rabbi Leonid Feldman, we are called to repairing our world—Tikkun Olam—stressing our responsibility to work towards healing the environment and be good stewards of God’s creation. From His All-Holiness Ecumenical Patriarch Bartholomew, we are invited “to approach our world as something invaluable and spiritual—that is to say, as something that we received as a gift from above and from our ancestors.”³³ But then he adds not only should we honor the world as gift, but we should treat it with thanksgiving as we hand it “down to our children in love—then we will invariably respect it as something far greater than us and our interests.”³⁴ From the Dalai Lama, we are exhorted to a “genuine sense of

³² See page 133 in this volume.

³³ See page 142 in this volume.

³⁴ See page 142 in this volume.

universal responsibility.”³⁵ Finally, from the Prince of Monaco, we are invited to join his commitment and engagement to address “the crucial issue of plastic pollution.”³⁶

In short, Vicini, Landrigan, and Bullock provide in this collection a true handbook for collectively facing and moving beyond the enormous threat of global plastic pollution. It could not come at a more urgent time in the history of humanity and the world.



James F. Keenan, SJ, is Vice Provost for Global Engagement, Canisius Professor in the Theology Department, and Director of the Jesuit Institute, at Boston College, and previously held the Gasson Chair and then the Founders Professorship in Theology. He earned his doctorate from the Pontifical Gregorian University in Rome and taught at Fordham University and at the Weston Jesuit School of Theology. He was Visiting Professor at Dharmaram Vidya Kshetram (Bangalore, India), the Pontifical Gregorian University (Rome, Italy), and Ateneo de Manila University (Philippines). He has authored and edited over a dozen of books and hundreds of articles and book chapters, and founded and directed the Moral Traditions Series of volumes in theological ethics published by Georgetown University Press. Globally, he was the founder and co-chair of the network Catholic Theological Ethics in the World Church and contributed to organize regional and global conferences and two book series. Member of numerous boards, he was also consultor of the US Conference of Catholic Bishops for the revision of the *Ethical and Religious Directives for Catholic Health Care Services* and the New York State Transplant Council, and was Group Leader of the Surgeon General’s Task Force on Responsible Sexual Conduct.

³⁵ See page 144 in this volume.

³⁶ See page 147 in this volume.