

“Fr. Kureethadam has provided an invaluable guide to the spiritual and theological vision of *Laudato Si'*. He also shows how ordinary Catholics can turn this vision into a personal action plan for assuming ecological responsibility. A clearly written and deeply challenging volume.”

—John T. Pawlikowski, OSM
Professor Emeritus of Social Ethics
Catholic Theological Union

“This is one of the clearest commentaries that I have read on *Laudato Si'*. The author stays faithful to the original text and manages to distil and even clarify its essential message with some carefully chosen examples, while not losing nuance. If anyone is in any doubt that questions to do with ecology are bound up with issues of poverty and marginalization, they should read this book. Yet, this author does more than just give information, this book is inspiring to read, and echoes the same combination of depth and spirituality that Pope Francis so wonderfully illustrates himself.”

—Celia Deane-Drummond
Professor of Theology
University of Notre Dame

“Fr. Joshtrom Kureethadam has written a powerful and transformative book. *The Ten Green Commandments* will ignite a radical environmental effort. He uses elegant words and a graceful style to open our hearts and rekindle our reverence for all living systems. His insight, warmth, and care for humanity is very compelling and supports the important scientific facts that are the basis for *Laudato Si'*.”

—Jacqueline Miller
Founder and CEO of Partnerships for Change

The Ten Green Commandments of *Laudato Si'*

Joshtrom Isaac Kureethadam



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Dedicated to

POPE FRANCIS
for his constant invitation
to care for one another
and for our common home

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Foreword

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The publication of *Laudato Si'* marked a very timely, important, and welcome turning point in the global conversation on the future of our climate and environment, and I am delighted to provide a foreword to Joshtrom Isaac Kureethadam's thoughtful, passionate, and deeply personal commentary.

Although some academics have long pointed out that environmental decisions in general, and the climate issue in particular, involved a strong ethical dimension, for all too long they have been seen as a purely pragmatic technical questions. I was particularly struck by how many commentators reacted to the publication of the encyclical with the suggestion that Pope Francis had “no business” to intervene in the climate change debate: for example, a prominent politician remarking, “I don't get economic policy from . . . my pope.” If an economic issue involves weighing up the rights of different generations, including those unborn, then where else should we turn for advice?

There is a widely held, and in my view unhealthy, view that climate policy is a purely technical matter to be left to the politicians and their unelected specialist advisors, with perhaps some input from academics—as if ensuring a “safe

climate” is somehow analogous to providing “safe drinking water.” The analogy is dangerous precisely because it can be used to exclude vitally important voices from the discussion. While Pope Francis has every right to intervene (and has intervened, very effectively, in *Laudato Si'*) to support the right of the poor to safe drinking water, to assess whether a specific water source is safe or not, we turn to the experts, their diagnostic kits and World Health Organization guidelines.

The “safe climate/safe water” mis-analogy has been, perhaps inadvertently, promoted by both sides of the climate debate. On the one hand, the propensity of some academics and environmental activists to focus on “tipping points,” “guardrails,” and “planetary boundaries” gives a clear impression that there are hard physical limits to the level of climate change that we and the earth as a whole can tolerate. From this, it is a small step to conclude that it is primarily a technical matter, involving more detailed computer models, more careful observations, and (of course!) more research funding to work out what these limits are. Climate policy becomes a matter of keeping within these scientifically determined limits at all costs, and that provided we succeed in doing so, we have nothing to worry about.

On the other hand, the small but vociferous community who take the rather Panglossian position that, in spite of mounting evidence to the contrary, climate change is nothing to worry about are equally keen to talk about “climate catastrophe”—but, in their case, to dismiss it. They know there is little evidence for global catastrophic harm within the planning horizons of today’s politicians. Although climate change is taking place in the blink of an eye from the perspective of the Creator, it is overwhelmingly likely that the weather in five to ten years’ time will be barely distinguishable from the weather today. People are, in many cases rightly, beginning to notice that the weather they experience now is perceptibly different from the weather they remember as children, but no one could

plausibly suggest that these changes amount to a global catastrophe. So, again, it suits the narrative of the Climate Panglossians to argue that dangerous climate change is too remote a possibility for it to be worth doing anything about it.

I myself experienced the unfortunate consequences of this technocratic framing of the climate change issue in the run-up to the ill-fated 2009 Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC) in Copenhagen. Like many climate scientists, I was repeatedly asked whether I supported statements like “the science dictates” a particular level of emission reduction by 2030. I was unable to do so, not because I didn’t personally support early emission reductions, but because it simply wasn’t true that they were dictated by climate science. The Copenhagen conference ended in acrimony largely because, I understand, many countries were suspicious they were being corralled into a position on the grounds that it was “dictated by science” when it self-evidently wasn’t. Climate policy must be informed by science, but it cannot be dictated by science, which is where *Laudato Si’* is so helpful.

Invoking the picture of “care for our common home,” the encyclical makes clear that stewardship of the environment is a matter of curation and cooperation, not simply operating within scientifically determined boundaries. As Pope Francis writes in the introduction, “We need a conversation which includes everyone, since the environmental challenge we are undergoing, and its human roots, concern and affect us all.” In his commentary, Kureethadam rightly draws out a common thread in *Laudato Si’* of rejection of technocratic solutions and embrace of a common responsibility. Only as citizens, not consumers, can we “consider goals transcending immediate economic interest.”

But how can a conversation that involves over seven billion citizens of this planet ever reach a conclusion? This is where the moral leadership of Pope Francis and other religious leaders

plays such an important role. One of the humbling things I have learned over a quarter-century in climate change research (during which, depressingly, the world has warmed by almost half a degree) is that quantifying how the climate system responds to greenhouse gas emissions, to which I have devoted most of my career, is probably the easiest and least important step in deciding what to do about it. This is arguably the only step in the assessment of the climate change issue that does not involve an ethical dimension.

Quantifying the impacts of different levels of warming, and how we value them, are much more challenging and ultimately more important questions, and already ethical issues begin to come into play. An increasingly important issue in the UNFCCC is the question of “Loss and Damage” as countries begin to assess how climate change is impacting them today. These impacts primarily emerge through changing risks of extreme weather events. Some types of events, such as heat waves and episodes of intense rainfall, are becoming more frequent because of climate change. Others, such as intense cold events in winter, are becoming less frequent. Determining how much these frequencies are changing due to external drivers such as rising greenhouse gas concentrations is a matter for meteorologists like myself. But in translating this into an assessment of overall harm, should we include only those harmful events that have occurred and have been made more likely by climate change? Or should we balance this against the harm avoided by hypothetical events that might have occurred, but did not, and were made less likely to occur by climate change? What if these harms affect different people: for example, if those living in the valleys are increasingly vulnerable to floods, while those living in the hills are enjoying lower heating bills in winter?

On an even broader scale, how do we value harm done to the present generation against harm done to the next generation and generations to come? One of the key insights to

emerge from physical climate science over the past decade (I wouldn't want to give you the impression we scientists are entirely incidental to this discussion) is the longevity of fossil carbon emissions. Once we release carbon dioxide into the atmosphere, its influence persists indefinitely, continuing to affect the weather and climate for thousands of years. So our emissions today will affect our great-great-grandchildren, unless an intervening generation steps in and pumps that carbon dioxide back out of the atmosphere and "refossilizes" it, a process that would be formidably costly and may not be feasible at all. But how do we weigh our responsibilities to our distant descendants, who will undoubtedly be living in a very different world to our own socially, economically, and environmentally, against our responsibilities to the poor who are alive today?

These are ethical questions and cannot be left to scientists and economists. In *Laudato Si'*, Pope Francis provides us with the necessary moral framework, recognizing the importance of "rejection of every form of self-centeredness and self-absorption" which is at the heart of the Christian message itself. The encyclical has already had a profound impact on the environmental debate in general and the discussion of our response to climate change in particular. In the preparations for the Paris Conference of the UNFCCC in December 2015, there was a much greater emphasis on bottom-up, inclusive initiatives such as the "High Ambition Coalition," resulting in a much more positive and hopeful conclusion, in stark contrast to the acrimony of Copenhagen in 2009.

For the first time, all nations of the world have affirmed their intention to address this global challenge and set themselves what was, to many, a surprisingly ambitious goal. In Article 2, they set out a collective aim "to strengthen the global response to the threat of climate change, in the context of sustainable development and efforts to eradicate poverty, . . . by holding the increase in the global average temperature

to well below 2°C above pre-industrial levels, and to pursue efforts to limit the temperature increase to 1.5°C." Going further, in Article 4 they recognized that achieving this goal would require "global peaking of greenhouse gas emissions as soon as possible" and "a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases in the second half of this century." Stripped of the jargon, this second sentence means an acknowledgment of the need for net zero carbon dioxide emissions before 2100.

Without the support of the leaders of the world's great religions, in which *Laudato Si'* played a central role, it is doubtful the world's governments would have felt able to commit to such an ambitious program. But getting governments to agree in a UN meeting is one thing; bringing on board the world's corporations, great and small, representatives of civil society, and ultimately private citizens will take many years. *Laudato Si'* provides us with the inspiration and moral compass to embark on this journey together. Joshtröm Isaac Kureethadam's book will be a welcome and insightful guide to the reader. But neither is an instruction manual for technocratic planetary management. Perhaps the most important insight in *Laudato Si'*, reaffirmed in Kureethadam's book, is the centrality of a personal response to these challenges and the hope expressed that humanity can, together, "seek a new beginning." I look forward to a continuing conversation between academics and the faithful and hope you will find this book as useful a guide to *Laudato Si'* as I have done.

Preface

“Laudato Si’ mi’ Signore” (“Praise be to you, my Lord”), the opening line of Saint Francis’s *Canticle of Creatures* and the title of Pope Francis’s encyclical on care for our common home, best sums up my personal feelings of profound gratitude on completing this volume. I have had the joy and the agony of dealing with ecological concerns for nearly a quarter of a century. Ever since I began to teach cosmology to undergraduates in the early 1990s, I was particularly concerned about the increasingly precarious state of our common planetary home as evidenced by the mounting avalanche of warnings from the scientific community in the last decades. Accordingly, I have tried to pass on to my students all these years not only a sense of awe and wonder before the grandeur and majesty of the infinitely vast universe but also a deep sense of concern for our increasingly fragile common home. Pope Francis’s encyclical on care for our common home was therefore deeply reassuring for me. It does respond to the greatest challenge of humanity today even though we have pretended not to see it for too long.

Laudato Si’ was itself overdue as a papal encyclical. Nearly ten years ago, I offered a weeklong course on stewardship of creation for a group of committed lay Catholics, as part of the commendable *Living Theology* program run by the British Jesuits. I remember how we dedicated the last session of the course to a sort of brainstorming on what should be the

components of a papal encyclical on the important question of creation care. The group felt that such an encyclical was not only necessary but also urgent in the light of what we discussed in the course. This group of lay people had, in fact, anticipated the encyclical. Along with them and scores of others within the church and outside who eagerly, and at times impatiently, awaited a papal encyclical on one of the most defining issues of our times and of Christian living, I praise the Lord for *Laudato Si'*.

I would also like to praise the Lord for Pope Francis, who already in the inaugural Mass of his pontificate stated that the protection of creation, of our common home, and of our common household, especially of the poor and vulnerable, was precisely the service to which the Bishop of Rome is called. I praise the Lord for his immediate predecessors, Pope John Paul II and Pope Benedict, who regularly spoke on ecological issues and in some way prepared the way for *Laudato Si'*. I praise the Lord for religious leaders around the world, the ecumenical patriarch Bartholomew I, in particular, who has been a clear and steady voice in defense of God's creation all these years. I also praise and thank the Lord for the countless array of scientists, scholars, community leaders, environmental movements, grassroots activists, and so many others who have tirelessly dedicated their energies all this while to remind us of the need to care for our imperiled common home before it is too late.

Laudato Si' is the longest of all papal encyclicals. It covers a wide range of issues spanning from climate change to creation theology and from favelas to coral reefs. The sheer number of questions dealt with in the encyclical could make one apprehensive to wade deeper into the text despite its easy language and informal style. The present volume is a modest attempt to gather together in a more accessible package the main ideas of the groundbreaking encyclical of Pope Francis. This is done

in terms of the “ten green commandments” for the care of our common home. These green commandments themselves follow the main outline of the six chapters of the encyclical and are arranged according to the scheme of the see-judge-act methodology increasingly used in social sciences.

The present volume offers an exposition of the main themes of the encyclical. It is not an evaluation or a critical appraisal of the text that could be done in more appropriate forums. I have only tried to provide a little guide to understand the encyclical better. I have also attempted to sketch out the wider contexts of Pope Francis’s reflections, taking a cue from ecological sciences and environmental discussions. I have cited extensively from the encyclical to let Pope Francis speak directly to the reader.

I need to thank so many people who have made this book possible. I prepared my first commentary on the encyclical within a fortnight of its publication. It was entitled precisely the “ten green commandments of *Laudato Si’*” and served as an introduction to the volume of the proceedings of a conference on sustainability held at the Salesian University in March 2015, which I edited. A number of people who read this introduction encouraged me to take forward my reflections and the present volume is the happy outcome of this journey. I thank Banzelão Julio Teixeira, who read through an earlier draft of the manuscript and offered some useful suggestions. I am deeply indebted to Sr. Helen Carey, FMA, who meticulously proofread the entire manuscript and offered valuable corrections.

I would like to place on record my gratitude to Professor Myles Allen, head of the Climate Change Group of the prestigious Environmental Change Institute at the University of Oxford, for having consented to write a beautiful foreword to the volume. I have found in him, and in many other scientists with whom I have had the opportunity to interact over

this period, a profound esteem toward the person of Pope Francis and a real sense of appreciation and gratitude for the moral leadership offered by him on such an important challenge facing humanity today.

For the encouragement and support for the publication of this book, I thank Barry M. Hudock, and the wonderful team at Liturgical Press.

Finally, I ardently pray that this humble volume may contribute to inflame in many hearts the zeal for the care of our common home.

“Send forth your Spirit, O Lord, and renew the face of the earth” (see Ps 104:30).

May 19, 2018

Solemnity of the Pentecost

Introduction

*“Francis, Go and Repair My House Which, as You See,
Is Falling into Ruin”*

One day in 1205, a young man, son of a wealthy cloth merchant in Assisi, restless and searching for the real goal of his life, walked into the dilapidated church of San Damiano in the outskirts of the town. There occurred something that would radically change the course of his life, the life of the church, and to an extent even of the world. Here is one of the earliest accounts of what happened, from the celebrated biography *Life of Francis* by Bonaventure:

One day when Francis went out to meditate in the fields he was passing by the church of San Damiano which was threatening to collapse because of extreme age. Inspired by the Spirit, he went inside to pray.

Kneeling before an image of the Crucified, he was filled with great fervour and consolation as he prayed. While his tear-filled eyes were gazing at the Lord’s cross, he heard with his bodily ears a voice coming from the cross, telling him three times: “Francis, go and repair my house which, as you see, is falling into ruin.”

Trembling with fear, Francis was amazed at the sound of this astonishing voice, since he was alone in the church; and as he received in his heart the power of the divine words, he fell into a state of ecstasy. Returning finally to

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his senses, he prepared to put his whole heart into obeying the command he had received. He began zealously to repair the church materially, although the principal intention of the words referred to that Church which Christ purchased with his own blood, as the Holy Spirit afterward made him realize. ”¹

God was asking Francis of Assisi to repair the church which had become dilapidated by the accumulation of excessive wealth, the search for mundane glory, widespread ignorance and immorality among the clergy, and a host of other problems. Deeply transformed by this mystical experience, Francis radically changed the course of his life. He began to spend long hours in prayer in empty caves and country chapels seeking to discern God’s will for him. He began to contemplate God’s beauty in nature where every flower, every blade of grass, every little bird, spoke to him of God’s infinite love and glory. He also began to care for the poor and needy people around him, particularly the lepers who lived as outcasts in the peripheries of the city. Soon he attracted many disciples. Together they initiated a gentle yet radical revolution in the church. Their arms were simple but incisive: evangelical poverty, simplicity, humility, and universal love. Historians today largely concur on how the humble revolution initiated by the *poverello* of Assisi and his followers made an important contribution in the renewal of the church in the centuries that followed. Francis was indeed a man raised by Divine Providence to renew the house of God in those times.

On the evening of March 13, 2013, as the winter sun was setting over the limpid skies of the eternal city, the large

1. Bonaventure, *Leggenda maggiore (Vita di san Francesco d’Assisi)*, *Fonti francescane* (Padua: Editrici francescane, 2004), 1038.

crowd at St. Peter's square went ecstatic. A plume of white fumes had just begun to spew out of the chimney of the Sistine Chapel accompanied by the continuous pealing of the church bells. They were witnessing a historical moment: the election of a new pope. In no time the sprawling square was filled to capacity as people rushed in from the neighbouring streets and alleys, and television crews began to perch themselves at vantage points. All eyes were fixed on the baroque balcony in the middle of the imposing facade of St. Peter's basilica, draped in red velvet for the occasion, where the new pope was scheduled to appear.

Several minutes later, a shy yet smiling person, clad in white, walked onto the balcony. There was a moment of silence. He was not any of the so-called *papabili* about whom newspaper columns and television channels had extensively gossiped in the days preceding the conclave. The pope-elect, Jorge Mario Bergoglio, the archbishop of Buenos Aires, was better known in the slums of his metropolis than in international media. Then the crowd burst into a thunderous applause and began to chant loudly "Francesco," "Francesco," the endearing name that the new pope had chosen for himself.

Many saw in the election of Pope Francis a divine intervention to "re-build" the Catholic Church in the wake of a stream of scandals and mishaps, factors that some even attributed to the resignation of his predecessor, Pope Benedict. Here was the new Francis who would rebuild the "house" of God that was falling into ruin. Pope Francis did not disappoint. He appeared to have set in motion, in full earnest and with courage, a spate of courageous reforms within the church, reaping some immediate and positive results already.

However, scarcely did anyone realize that the mission of Pope Francis was to rebuild not just the "house" of the church but a much larger one, our very common home.

*“Francis, Go and Repair My House Which, as You See,
Is Falling into Ruin”*

Laudato Si', the encyclical of Pope Francis on creation care, significantly carries the subtitle *On Care for Our Common Home*.² It is not about mere “environment” that the encyclical is concerned with, but about the fate of our very home. In fact, the opening chapter carries the title “What is happening to our common home.”

Today, our common planetary home is falling into ruin. We are on the brink of an unprecedented global challenge regarding the sustainability of our common home, which places a question mark on the very future of human civilization. The horror movie of the destruction of our home planet, the only abode for complex forms of life in the entire universe—at least as far as we know—may now begin to play out before our very eyes. We are running out of time, we are in the eleventh hour. It appears that we are condemned to a warming world, sweltering temperatures, melting glaciers, and inundated shorelines in the decades and centuries to come. We may be condemning future generations to a common home in ruins.

We are indeed playing a reckless gamble with our common home and ultimately with our own destiny and survival. Our actions today will determine the future not only of the present generations but also of future generations for millennia. As Seán McDonagh points out, “If this generation does not act, no future generation will be able to undo the damage that this generation has caused to the planet.”³ We are indeed living in a critical and crucial moment regarding the habitability of our very common home and of the future of humanity.

2. Pope Francis, Encyclical Letter *Laudato Si'* (Vatican City: Libreria Editrice Vaticana, 2015).

3. Seán McDonagh, *The Death of Life: The Horror of Extinction* (Dublin: Columba Press, 2004), 151.

It is against this background that Pope Francis appears to have stepped into the scene. He too appears to have given a receptive hearing to the command of the Lord, like his namesake centuries ago, to “go and repair my house.” In the encyclical *Laudato Si'*, Pope Francis urges the Catholic Church, the Christian communities around the world, followers of other religious tradition, and all people of good will to earnestly begin to care for our common home that is beginning to crumble.

Francis is the first pope to dedicate an entire encyclical—one of the highest forms of papal magisterium and next only to the Apostolic Constitution—to the question of the care of our common home. Pope Francis, given his towering moral stature and his unique qualities as a much loved and charismatic leader around the world—“an authority in authority”⁴ as it is widely acknowledged—is uniquely poised to offer leadership in efforts to address and respond to the crisis of our common home. However, he is not alone and can count on a large cloud of witnesses in this regard. As the pope himself acknowledges in the encyclical, “the reflections of numerous scientists, philosophers, theologians and civic groups” have “enriched the Church’s thinking on these questions” (7).⁵

In the preamble to the encyclical, the pope mentions some outstanding witnesses within the Christian communities with regard to the stewardship of our common home. He begins with his own predecessors in the first place. Pope Francis opens his survey of the magisterium of his predecessors with Pope Paul VI who had “referred to the ecological concern as ‘a tragic

4. Daniel R. DiLeo, “*Laudato Si'*, Interest, and Engagement: An Account via Catholic Public Theology and Authority,” *Environment: Science and Policy for Sustainable Development* 57/6 (2015), 7.

5. The numbers in parentheses following quotations of *Laudato Si'* refer to paragraph numbers in the encyclical.

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consequence' of unchecked human activity" (4). Paul VI had admonished way back in 1971: "Due to an ill-considered exploitation of nature, humanity runs the risk of destroying it and becoming in turn a victim of this degradation"⁶ (4).

Pope John Paul II was particularly sensitive on ecological issues and had proclaimed St. Francis of Assisi as the model of ecologists already in 1979.⁷ John Paul II has left a rich heritage of teachings regarding humanity's relationship with the natural world.⁸ Pope Francis makes a succinct summary of it in *Laudato Si'*, part of which we will cite here.

Saint John Paul II became increasingly concerned about this issue. In his first encyclical he warned that human beings frequently seem "to see no other meaning in their natural environment than what serves for immediate use and consumption."⁹ Subsequently, he would call for a global ecological *conversion*.¹⁰ At the same time, he noted that little effort had been made to "safeguard the moral conditions for an authentic *human ecology*."¹¹ The destruction of the human environment is extremely serious, not only because God has entrusted the world to us men and women, but because human life is itself a gift which must be defended from various forms of debasement. Every effort to protect and

6. Pope Paul VI, Apostolic Letter *Octogesima Adveniens* (1971), 21: AAS 63 (1971), 416–17.

7. Pope John Paul II, Apostolic Letter *Inter Sanctos* (1979): AAS 71 (1979), 1509–10.

8. See Marybeth Lorbiecki, *Following St. Francis: John Paul II's Call for Ecological Conversion* (New York: Rizzoli Ex Libris, 2014).

9. John Paul II, Encyclical Letter *Redemptor Hominis* (1979), 15: AAS 71 (1979), 287.

10. Cf. John Paul II, *Catechesis* (17 January 2001), 4: *Insegnamenti* 41/1 (2001), 179.

11. John Paul II, Encyclical Letter *Centesimus Annus* (1991), 38: AAS 83 (1991), 841.

improve our world entails profound changes in “lifestyles, models of production and consumption, and the established structures of power which today govern societies.”¹² (5)

We may also recall John Paul II’s important Message for the World Day of Peace in 1990, “Peace with God the Creator, Peace with All of Creation,” the first papal document to be entirely devoted to ecological questions. In this concise but incisive document, the pope had described the ecological crisis as a moral problem and called for a radical change of our lifestyles to overcome the crisis.

Pope Benedict had been a steady voice in the defence of creation during his pontificate, meriting him the appellation of a “green pope.”¹³ He did not stop at symbolic gestures like installing solar panels on the roof of the Paul VI Hall, the main auditorium of the Vatican, but on diverse occasions intervened for the defence of the natural world. Pope Francis evidences the integral approach of Pope Benedict on ecological questions when he cites: “He [Pope Benedict] observed that the world cannot be analyzed by isolating only one of its aspects, since ‘the book of nature is one and indivisible,’ and includes the environment, life, sexuality, the family, social relations, and so forth” (6). According to Pope Benedict, “The misuse of creation begins when we no longer recognize any higher instance than ourselves, when we see nothing else but ourselves”¹⁴ (6). Rowan Williams, the former Anglican archbishop of Canterbury, is of the opinion that *Laudato Si’* is in some way a natural development of the Christian humanism

12. *Ibid.*, 58: AAS, 863.

13. See Woodeene Koenig-Bricker, *Ten Commandments for the Environment: Pope Benedict XVI Speaks Out for Creation and Justice* (Notre Dame, IN: Ave Maria Press, 2009), 1–10.

14. Pope Benedict XVI, *Address to the Clergy of the Diocese of Bolzano-Bressanone* (6 August 2008): AAS 100 (2008), 634.

of Pope Benedict's theology, especially as found in *Caritas in Veritate*.¹⁵

In the preamble to *Laudato Si'*, Pope Francis takes pains to evidence the significant contribution also of the ecumenical patriarch Bartholomew I, known as the "green patriarch" for his commitment to ecological questions for nearly a quarter of a century.¹⁶ The leadership of the ecumenical patriarch on ecological issues is not only acknowledged by Pope Francis but also drawn upon and cited approvingly. The pope dedicates two extensive paragraphs to present some of the key ecological intuitions of Bartholomew like the concept of ecological sin, the need for repentance, the spiritual and theological roots of the problem, and the vital importance of asceticism in responding to the crisis. The pope retains as highly important the patriarch's teachings on the concept of ecological sin, namely that abuse of creation on the part of humanity is truly a sin against humanity and against the very Creator. For "to commit a crime against the natural world is a sin against ourselves and a sin against God"¹⁷ (8).

Apart from the magisterium of his own immediate predecessors and of the "green patriarch" Bartholomew I, there is yet another significant source from which Pope Francis has drawn extensively. It is the rich and varied corpus of the statements of Catholic Bishops' Conferences around the world in the last few decades on the problem of the current

15. Rowan Williams, "Embracing Our Limits: The Lessons of *Laudato Si'*," *Commonweal* (9 October 2015), 13.

16. For a discussion of the ecumenical context of the encyclical, see the contribution of John Chryssavgis, theological advisor to the ecumenical patriarch on environmental issues: "Pope Francis' *Laudato Si'*: A Personal Response, An Ecumenical Reflection," *Phronema* 31 (2016), 17–21.

17. *Address in Santa Barbara, California* (8 November 1997); cf. John Chryssavgis, *On Earth as in Heaven: Ecological Vision and Initiatives of Ecumenical Patriarch Bartholomew* (New York: Fordham University Press, 2012).

ecological degradation and on the importance of creation care. Since the 1980s, many Bishops' Conferences have issued statements on the deteriorating state of our common planetary home and on specific ecological hazards in their respective regions. In his encyclical on creation care, Pope Francis allows the papal magisterium to be fed from the teachings of his brother bishops around the world—the so-called “regional magisterium.”¹⁸ It is totally unprecedented and reflects the pope's desire to build a more collegial and participatory church. *Laudato Si'* carries citations from several national and regional bishops' conferences, as many as twenty-one of them, spread across five continents.

Pope Francis's encyclical thus draws from a huge repertoire of sources on ecological reflection within the Catholic and Christian communities, in other religions, and in the wide spectrum of empirical, human, and social sciences. It is a fitting approach for an encyclical eager to dialogue with all people of good will on the destiny of our planetary home.

The rich and varied sources of *Laudato Si'* make it a very comprehensive and wide-ranging text, surveying a sweeping range of issues, spanning from climate change to creation theology and from favelas to coral reefs. It is the longest of all encyclicals so far and covers a wide range of ecological, social, political, economic, theological, anthropological, cultural, and related questions. Indeed, the encyclical offers so much that it makes its reading and application not very easy. The scope of the present volume is to gather together in a more accessible package the main messages of the groundbreaking encyclical of Pope Francis on care for our common home. We shall do so by presenting the “ten green commandments” of the encyclical.

18. Clemens Sedmark, “Traditional Concerns, New Language? Reflections on *Laudato Si'*,” *The Heythrop Journal* 58 (2017), 942.

The main messages of the encyclical can be summed up in terms of “ten green commandments” from Pope Francis. Here they are:

- I. Earth, our common home, is in peril. Take care of it.
- II. Listen to the cry of the poor who are the disproportionate victims of the crisis of our common home.
- III. Rediscover a theological vision of the natural world as good news (gospel).
- IV. Recognize that the abuse of creation is ecological sin.
- V. Acknowledge the deeper human roots of the crisis of our common home.
- VI. Develop an integral ecology as we are all interrelated and interdependent.
- VII. Learn a new way of dwelling in our common home and manage it more responsibly through a new economics and a new political culture.
- VIII. Educate toward ecological citizenship through change of lifestyles.
- IX. Embrace an ecological spirituality that leads to communion with all of God’s creatures.
- X. Care for our common home by cultivating the ecological virtues of praise, gratitude, care, justice, work, sobriety, and humility.

The ten green commandments of *Laudato Si'* can themselves be best understood in terms of the see-judge-act methodology, popular in the church since the Second Vatican Council. We

shall offer below a rapid summary of the ten green commandments enumerated above within the see-judge-act framework. It could be a sort of “three-dimensional” view of the encyclical which could help us to understand the text in greater depth.

The first two green commandments of *Laudato Si'* are concerned about “seeing” the precarious situation of our common home. This is precisely the scope of the opening chapter of the encyclical entitled “What is happening to our common home.” Here Pope Francis speaks of two cries: the cry of the earth and the cry of the poor. The pope begins with a physical description of the crisis of our common home. The encyclical employs the best of scientific evidence—a fact acknowledged by many prominent members of the scientific community in their initial reactions to the encyclical—to look at the current state of our world. It goes on to offer an empirical description of the challenges facing our common home: pollution and climate change, loss of biodiversity, depletion of natural resources including water, decline in the quality of human life, and the breakdown of society. The second green commandment speaks of the cry of the poor. The ecological crisis is not just a physical problem but also a deeply moral crisis. It is so precisely because of the disproportionate impacts of the crisis on poor people and communities around the world. Ecological questions need to be considered therefore within the ethical framework of eco-justice.

The next three green commandments are concerned about “judging” the precarious situation of our common home. The third green commandment offers the theological criterion to judge the crisis of our common home. Pope Francis invites us to see the world from a religious perspective, recognizing in the natural world the “gospel of creation”—the title of the second chapter of the encyclical. For believers, as Pope Francis points out, the world is not just nature but creation. Our world is indeed “good news” which reveals

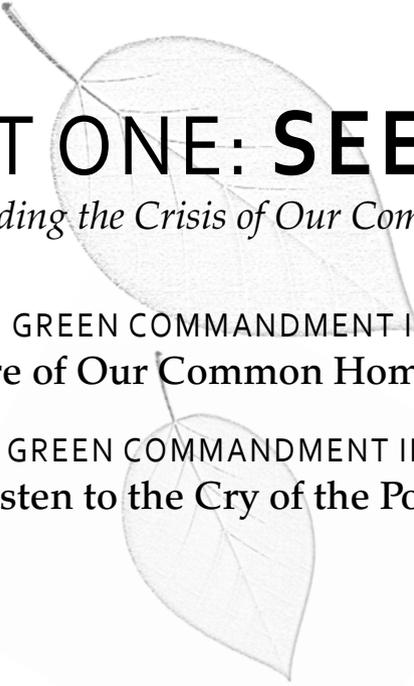
the love, beauty, and glory of the Creator. As is evident in the fourth green commandment, Pope Francis describes the destruction of our common home as sin, drawing also from the rich magisterium of Ecumenical Patriarch Bartholomew in this regard. Ecological sin is the rupture of relationships with the natural world, our fellow human beings, and the Creator and calls for repentance on the part of humanity. Repentance begins by acknowledging our human responsibility in defiling our common home, as claimed by the fifth green commandment. In fact, the third chapter of the encyclical is entitled "The Human Roots of the Ecological Crisis." The deepest roots of the crisis can be found in modern anthropocentrism based on which human beings place themselves at the center of the universe, usurping the primacy of the Creator and ruthlessly pillaging the rest of creation.

The last five green commandments are concerned with "acting," after having seen and judged the profound crisis of our common home. The pope dedicates the last three chapters of the encyclical to discuss ways and means to respond to the crisis. As evidenced by the sixth green commandment, the pope argues that we stand in need of an integral approach to understand, evaluate, and respond to the crisis of our common home. Pope Francis dedicates an entire chapter to the concept of integral ecology. The seventh green commandment highlights the emphasis placed by Pope Francis in the encyclical on a new way of dwelling in our common home and managing it more responsibly. This is done in the fifth chapter of the encyclical entitled "Lines of Action." The pope speaks of the importance of acting together at the international, national, and local levels to safeguard our common home. The pope also calls for a new economy and a new political order both of which need to be at the service of the common good. In the last chapter of the encyclical, Pope Francis speaks of the two basic areas of ecological education and ecological

spirituality, so vital for the care of our common home. Pope Francis calls for ecological education capable of establishing a new covenant between humanity and the natural world. He also speaks of the variety of settings for education to ecological citizenship: schools, families, media, catechesis, and houses of religious formation. The pope also traces the contours of an ecological spirituality for our times. Such a spirituality is deeply incarnational and offers a sacramental vision of the natural world as permeated by divine presence. As the pope points out, the whole of creation bears the trinitarian imprint as it is ultimately God's handiwork, created and constantly sustained by God's infinite love.

The last of the green commandments of *Laudato Si'* concerns the ecological virtues that we need to cultivate in order to become creative and responsible stewards of our common home. The ecological virtues do not receive special treatment in the encyclical as such, but are mentioned repeatedly throughout the text. They are signposts that indicate the road we need to travel in caring for our common planetary home. We shall highlight seven of the ecological virtues in our commentary of *Laudato Si'*: praise, gratitude, care, justice, work, sobriety, and humility.

Through a detailed presentation of each of the ten green commandments mentioned above, we now embark on the journey of study and meditation of *Laudato Si'*, Pope Francis's encyclical letter on care for our common home.



PART ONE: SEEING

(Understanding the Crisis of Our Common Home)

GREEN COMMANDMENT I

Take Care of Our Common Home in Peril

GREEN COMMANDMENT II

Listen to the Cry of the Poor

Our first two green commandments are about seeing and understanding the current degradation of our common home. In the very first chapter of the encyclical entitled "What is happening to our common home," Pope Francis offers a rather holistic understanding of the contemporary ecological crisis and invites us to "hear both the cry of the earth and the cry of the poor" (49). According to him, the ecological crisis is indeed "one complex crisis which is both social and environmental" (139).

The first green commandment offers a physical understanding of the crisis of our common home with the support of credible scientific evidence. We begin with a reflection on the very expression "common home," which clearly signals Pope Francis's desire to move beyond the "environmental" straightjacket in which ecological questions have been mostly addressed in the past. We then go on to discuss the main physical manifestations of the ecological crisis highlighted in the encyclical. These include pollution and waste, climate change and its impacts, the depletion of natural resources, the scarcity of fresh drinking water, and the problem of species extinction and biodiversity loss. The crisis facing our common home is truly global and totally unprecedented.

The second green commandment tells us that the contemporary ecological crisis is not just a physical problem but is also a deeply moral crisis. It is so since the poor are the early and disproportionate victims of the crisis of our common home. The encyclical links the cry of the earth inextricably with the cry of the poor. Pope Francis pays special attention in the encyclical to the ecological hazards faced by poor communities, indigenous groups, and future generations. The ecological crisis raises the question of eco-justice and deals with thorny issues like the ecological debt that the developed world and richer communities owes to the poorer nations and communities around the world.



GREEN COMMANDMENT I

Take Care of Our Common Home in Peril

The first of the green commandments of *Laudato Si'* tells us that Earth is our common home and that we need to care for it. The precarious state of the earth is the fundamental reason for the pope to devote, for the first time in the history of Catholic social teachings, an entire encyclical to care for our common home. This is evident in the very subtitle of the text. It is about “our common home” that he “would like to enter into dialogue with all people” (3). The expression *our common home* occurs several times in the encyclical, and the need to care for it is the *leitmotiv* of the entire document.

We shall reflect below on the paradigm shift ushered in by Pope Francis in the use of the expression *common home*, moving away from the talk about the “environment” that has dominated the ecological discourse in the last few decades. We will also dwell on the uniqueness of planet Earth as a unique “home” for life in the infinitely vast universe. We will then go on to examine the main physical manifestations of the crisis of our common home as outlined in the encyclical: pollution and waste, climate change and its impacts, the depletion of natural resources and especially the scarcity of fresh drinking water, and the unprecedented

scales of biodiversity loss. The pope warns that we risk the danger of leaving an uninhabitable planetary home for future generations if we are not willing to change radically the course of our current civilization.

“Our Common Home”: A Paradigm Shift

In talking about Earth as our common home, Pope Francis ushers in a major paradigm shift. The crisis that humanity faces today is the crisis of our very common home. The contemporary ecological crisis is not merely an “environmental” problem or even a host of environmental problems, as it is generally supposed. It is about the crisis of our very common home.

For too long, the ecological crisis has been relegated to a set of environmental problems.¹ We have remained complacent, seeing more space allocated to environmental issues in newspaper columns, on television channels, on bookshop shelves, and increasingly even in school and university curricula. As a result, for most people, *environment* has meant merely something external and outside of themselves, and as such has remained a peripheral and secondary concern. We have become complacent with the belief that a bit of recycling and use of fluorescent electric bulbs and similar tricks are all that it takes to be *environment-friendly*. We have been content to leave environmental questions to the Greens and die-hard environmental activists at the local level and to yearly high-level summits under the auspices of the United Nations on the global arena. In the meantime, we have carried on with our routine lives, consuming material goods with increasingly rapacious appetites, enthralled by the glittering

1. Joshtrrom Isaac Kureethadam, *Creation in Crisis: Science, Ethics, Theology* (New York: Orbis, 2014), 1–2.

promises of the advertisement industry, and lulled by the beliefs subtly driven home by the corporate industry and mainstream media that environmental concerns are, after all, only peripheral and marginal.

In *Laudato Si'*, Pope Francis reminds us of what we are really sleepwalking into: a possible collapse of our very home, with dire implications for the members of our common household. The encyclical proposes a sort of a paradigm shift in understanding and dealing with the crisis facing our home planet. In fact, if we were to follow the etymological route, the crisis has to do with the discourse (*logos*) centered around our very common home (*oikos*). It is an *eco-logical* crisis, having to do with the fate of our very home. Earth is our home more than the mere environment that happens to surround us. Earth is the home that engendered us and sustains us. Earth is not merely an environment that we can swap for another one, by migrating somewhere else when our home planet is degraded beyond redemption, like it is sometimes presented in popular science fiction and in the techno-savvy media. Earth is our home, and our only home. We are Earthlings, *imago mundi*, formed from the dust of the earth, inhabitants of the common home of Earth.

Breaking free of the environmental jargon in referring to the ecological crisis as the possible collapse of our common home adds a deeply existential dimension to the whole discussion. Seen in this way, we are not speaking of questions external and marginal to us. We are not talking about one of the many challenges that humanity has to face—and we know that there is no dearth of them. Instead, we are grappling with the destiny of our common home, indeed, humanity's common destiny, along with that of the rest of the biotic community. Without our common home, we cannot live and live well. When we pollute and despoil our common home, we are endangering the quality of our own life, our own

well-being, and that of other living beings on Earth, as well as of future generations, our children, and their children. Evidently, one cannot remain indifferent to, but must be passionate about, the crisis of our common home and of our common household.

In a very insightful way, Pope Benedict XVI had summed up this important truth in the *Message for the World Day of Peace* in 2008 when he said that “for the human family, this home is the Earth” and that it is “essential to *sense* that the Earth is *our common home*.”²

In *Laudato Si'*, Pope Francis tells us that it is fundamental to recover the perception of our Earth as our common home. Life, human life, civilization, religion, philosophy, art, music, literature, science and technology, and a thousand other artifacts of human culture have been possible because there is the common home of the Earth to dwell in, and not vice versa! In fact, what is primary in this sense is being in this home, and the rest, however important, is only secondary, because without the former the latter does not, and cannot, exist. Without our common home, we cannot exist and flourish. Earth can exist without modern humans, as it has done for over 99.9 percent of its history. But we cannot exist without our common home.

The time has come to call the ecological crisis for what it really is—a possible collapse of our very home, with dire implications for the members of our common household. This is what Pope Francis does in *Laudato Si': On Care for Our Common Home*. The pope speaks of our common home in very intimate and “homely” terms as a *sister* and as a *mother* in the very first paragraph of the encyclical. Referring to his name-

2. Pope Benedict XVI, *The Human Family, A Community of Peace* (Message for the World Day of Peace, 1 January 2008), nn. 7–8. The italics are mine.

sake, the pope writes: “Saint Francis of Assisi reminds us that our common home is like a sister with whom we share our life and a beautiful mother who opens her arms to embrace us” (1). According to the pope, “We need only take a frank look at the facts to see that our common home is falling into serious disrepair” (61). The pope points out that we have inflicted great harm on our common home “by our irresponsible use and abuse of the goods with which God has endowed her,” and “she ‘groans in travail’ (*Rom* 8:22)” (2). As he says in the introduction to the encyclical, the protection of our common home is an “urgent challenge” (13).

The paradigm shift of *Laudato Si’* consists in Pope Francis’s reminder to humanity that our common home is really in peril and that we need to begin to care for it before it is too late.

Earth, A Unique Home for Life

The understanding of Earth as our common home proposed in *Laudato Si’* is, in fact, as ancient as the book of Genesis, the very first verses of which take us to the dawn of creation.³ The creation narrative, unfolding as a majestic cosmic drama that spans over six celestial days, is centered around the preparation of a “home” for all living beings, including humans. Within the vault of the heavens, a formless earth is lovingly fashioned by the Creator into a beautiful home, separating the dry land from the waters, adorning it with trees and vegetation, flowers and fruits, and hosting there living things of every kind, including birds, fishes, and animals. In fact, animals, and human beings themselves, are created only on the very last day, only after a proper abode has been prepared for them—a home to dwell in! The

3. Kureethadam, *Creation in Crisis*, 4.

sequence of events in the creation saga is not casual. It is only after a home has been prepared that life, including human life, can be hosted there. Earth is this home for humanity and for the rest of the commonwealth of life.

Significantly, most recent advances in astronomy and life sciences have shed light on the magnificent process in which Earth became the home for life that we are familiar with today.⁴ The building blocks necessary for the construction of our common home were originally created and gradually molded in the cosmic furnace of the universe over billions of years. Privileged to cruise through space in the right niche, at the right distance from its home star, our home planet, which was initially only a cauldron of gaseous material and dust of heavy elements, gradually evolved to become the home for life.

Earth became a home for life through a concomitance of myriad factors.⁵ There is, first of all, its position in the solar system, ninety-three million miles distant from the sun, a distance suitable for maintaining an optimal temperature that allows water to remain liquid, a fundamental requirement for life to exist and flourish. Its present position also guarantees the right gravitational pull from the sun, from its own moon—which keeps the earth spinning at the right speed and tilting at the right angle, factors that affect the present day-night cycle and the tides in the oceans—and even from a fellow planet like Jupiter which curiously influences the stability of Earth's orbit. The twenty-three-and-a-half-degree inclination of the earth to the sun creates the seasons and makes agriculture possible. The earth also has the right mass to possess the proper gravitational attraction that in turn entitles it to have its own atmosphere, unlike the moon which does not have

4. See *ibid.*, 16–21.

5. *Ibid.* 22–23.

one and where consequently life can never evolve as it did on Earth. Earth retains an atmosphere and water at its surface because of the protective magnetic field generated in its liquid iron/nickel core. The magnetic field also acts as a protective shield from dangerous ionizing radiations from the solar wind, while the ozone layer in the upper layers of the atmosphere blocks out the harmful ultraviolet rays. The atmosphere on Earth has the right composition of gases conducive to life: nitrogen, oxygen, carbon dioxide, and others. Our home planet also enjoys the right greenhouse effect which warms up the atmosphere to the optimum temperature.

The Earth is indeed the “garden planet” of the universe,⁶ where life had a magnificent evolution from single cells to the extravagant complexity of today. We remain awestruck by the wonderful saga of how our single planet became a marvellous “home,” where life evolved from single cells to conscious beings like us through complex processes that unfolded over millions and millions of years. Earth is what a 2011 document from the Pontifical Academy of Sciences called “a planet blessed with the gift of life”!⁷ The group of eminent scientists who were also among the principal scientific advisors of Pope Francis in the drafting of the encyclical wrote:

We all live in the same home. By acting now, in the spirit of common but differentiated responsibility, we accept our duty to one another and to the stewardship of a planet blessed with the gift of life. We are committed to ensuring that all inhabitants of this planet receive their daily bread, fresh air to breathe and clean water to drink as we are aware

6. See *The Cry of the Earth: A Pastoral Reflection on Climate Change by the Irish Catholic Bishops' Conference* (2009), 7.

7. Pontificia Academia Scientiarum, *Fate of Mountain Glaciers in the Anthropocene: A Report by the Working Group Commissioned by the Pontifical Academy of Sciences* (5 May 2011), 2, 15.

that, if we want justice and peace, *we must protect the habitat that sustains us.*⁸

Laudato Si' is concerned about the precarious state of Earth, our unique common planetary home blessed with the gift of life.

Our Common Home Is in Peril

Laudato Si' begins with taking stock of what is happening to our common home, consonant with the see-judge-act methodology employed throughout the encyclical by Pope Francis. The very first chapter of the encyclical is entitled "What is happening to our common home." The starting point of the encyclical is thus the precarious state of our common home, a totally "unprecedented" (17) situation in which we find ourselves. The pope begins with a physical description of the crisis of our common home, basing himself on solid scientific evidence and carefully selected empirical data, as he himself states: "drawing on the results of the best scientific research available today" (15). He enumerates the main challenges facing our common home, all of which have a detrimental impact on the quality of human life and the stability of human communities around the world. He invites humanity to face "those questions which are troubling us today and which we can no longer sweep under the carpet" (19).

As Pope Francis indicates, the problem is precisely with the "rapidification" of changes that human activities are causing to the sustainability of our home planet. "Although change is part of the working of complex systems, the speed with which human activity has developed contrasts with the

8. Ibid. The italics are mine.

naturally slow pace of biological evolution” (18). Here it may be recalled, by way of example, how the current rates of extinction of species exceed those of the historical past by several orders of magnitude. According to scientists, the normal background rates of extinction is roughly 0.1–1.0 extinctions per million species per year.⁹ But, as per the *Millennium Ecosystem Assessment*, “Over the past few hundred years, humans have increased species extinction rates by as much as 1,000 times the background rates that were typical over Earth’s history.”¹⁰ In fact, scientists fear that extinction rates will increase to the order of 1,000 to 10,000 times background rates over the coming decades.¹¹ The rapidity with which human activities are altering ecosystems is alarming indeed. In a similar way, the emissions of greenhouse gases from human activities causing climate change is at least a hundred times faster than the natural rates.¹²

In *Laudato Si’*, Pope Francis offers a masterly synthesis of the manifold manifestations of the contemporary ecological crisis, the crisis of our very home: pollution and waste, climate change, depletion of natural resources especially water, and biodiversity loss. These “several aspects of the present ecological crisis” (15) are what Pope Francis calls “cracks in the planet that we inhabit” (163).

Significantly, the pope begins the description of the defilement of our common home with pollution and waste. In fact, our awareness of the precarious state of our home planet

9. Millennium Ecosystem Assessment, *Ecosystems and Human Well-being: Biodiversity Synthesis* (Washington: World Resources Institute, 2005), 21.

10. *Ibid.*, 3.

11. *Ibid.*, 43. See also Henrique M. Pereira et al., “Scenarios for Global Biodiversity in the 21st Century,” *Science* 330 (2010), 1497.

12. Pontificia Academia Scientiarum, *Fate of Mountain Glaciers in the Anthropocene*, 4.

began more than fifty years ago, precisely with the problem of pollution. It was highlighted by the classical work of Rachel Carson in 1962: *The Silent Spring*,¹³ which called attention to the health impacts of pollution. Pollution is a distinctly modern phenomenon which began with the onset of the Industrial Revolution and has peaked in the last few decades of economic expansion. In fact, the economic growth and industrial development of the modern era has a heavy bill attached to it, namely, the pollution of our planetary home. Human activities, modern industrial and agricultural activities in particular, appear to have polluted almost all areas of our common home: the air, the land, and the waters. The pope offers a long list of the types of pollution “caused by transport, industrial fumes, substances which contribute to the acidification of soil and water, fertilizers, insecticides, fungicides, herbicides and agrottoxins in general” (20). The encyclical even speaks of “mental pollution” on account of the overload of information in our age of internet communication, which often “has more to do with devices and displays than with other people and with nature” (47).

Pope Francis is particularly critical of the problem of waste, a detrimental residue of our modern consumer culture. “Each year hundreds of millions of tons of waste are generated, much of it non-biodegradable, highly toxic and radioactive, from homes and businesses, from construction and demolition sites, from clinical, electronic and industrial sources” (21). He also notes “that approximately a third of all food produced is discarded” and denounces that “whenever food is thrown out it is as if it were stolen from the table of the poor”¹⁴ (50). He points to the real and deeper source of the problem of waste: “a throwaway culture” which “quickly reduces things to rub-

13. Rachel Carson, *Silent Spring* (Boston: Houghton Mifflin, 1962).

14. Pope Francis, *Catechesis* (5 June 2013): *Insegnamenti* 1/1 (2013), 280.

bish" (22). Pope Francis masterly sums up the harm that human pollution and mindless waste are causing to our beautiful home. "The earth, our home, is beginning to look more and more like an immense pile of filth!" (21).

The encyclical then takes up the most important of the challenges to our common home today, namely, climate change. Pope Francis sees "climate as a common good, belonging to all and meant for all." He speaks forthrightly of the scientific consensus on the issue of climate change: "A very solid scientific consensus indicates that we are presently witnessing a disturbing warming of the climate system." He also backs the scientific convergence that "most global warming in recent decades is due to the great concentration of greenhouse gases (carbon dioxide, methane, nitrogen oxides and others) released mainly as a result of human activity" (23). The pope also points to some of the main sources of climate change. "The problem is aggravated by a model of development based on the intensive use of fossil fuels, which is at the heart of the worldwide energy system. Another determining factor has been an increase in changed uses of the soil, principally deforestation for agricultural purposes" (23).

In the encyclical, the pope also refers to several of the more conspicuous impacts of climate change like "an increase of extreme weather events," "a constant rise in the sea level" (23), pressure on the "availability of essential resources like drinking water, energy and agricultural production in warmer regions," "the extinction of part of the planet's biodiversity," "the melting in the polar ice caps and in high altitude plains," "the loss of tropical forests," "the acidification of the oceans" with consequences for the marine food chain. The pope warns that "if present trends continue, this century may well witness extraordinary climate change and an unprecedented destruction of ecosystems, with serious consequences for all of us." He notes, for example, how "a rise in the sea level, for example, can create extremely serious situations, if we consider

that a quarter of the world's population lives on the coast or nearby, and that the majority of our megacities are situated in coastal areas" (24).

Carrying on with the description of the alarming situation of our common home currently, the encyclical moves on to the question of the fast depletion of natural resources. We are not only despoiling our common home but also wasting away and fast draining up the finite resources of our common household. The pope does not mask his staunch critique of current levels of consumption by the rich that have led to the exploitation of our home planet beyond acceptable limits: "We all know that it is not possible to sustain the present level of consumption in developed countries and wealthier sectors of society, where the habit of wasting and discarding has reached unprecedented levels" (27).

The encyclical takes up in particular the question of fresh water, the very source of life and the most critical of all natural resources. "Fresh drinking water is an issue of primary importance, since it is indispensable for human life and for supporting terrestrial and aquatic ecosystems. Sources of fresh water are necessary for health care, agriculture and industry" (28). The pope is particularly concerned about "the quality of water available to the poor" which leads to water-related diseases and even deaths (29). In *Laudato Si'*, Pope Francis affirms the universal right to accessible drinking water and is critical toward the "growing tendency, despite its scarcity, to privatize this resource, turning it into a commodity subject to the laws of the market" (30). Aware that "acute water shortage may occur within a few decades unless urgent action is taken" (31), the encyclical also points to the danger that scarcity of water or its control by large multinational businesses may become a major source of conflict in this century.¹⁵ We

15. Cf. Francis, *Greeting to the Staff of FAO* (20 November 2014): AAS 106 (2014), 985.

may conclude with the pope's affirmation that "*access to safe drinking water is a basic and universal human right, since it is essential to human survival and, as such, is a condition for the exercise of other human rights*" (30).

The last of the physical manifestations of the crisis of our common home is the current loss of biodiversity to which the encyclical dedicates relatively ample space. It may be recalled here how there exists a unanimous consensus in the scientific community today that the Earth is on the verge of a sixth mass extinction of species and consequent loss of biodiversity. The pope too begins by taking stock of the gravity of the biodiversity crisis. "Each year sees the disappearance of thousands of plant and animal species which we will never know, which our children will never see, because they have been lost for ever" (33).

While the species are extremely important resources for meeting human needs like nutrition and medicine and for regulating ecosystems, the encyclical invites us not to overlook "the fact that they have value in themselves" (33). In fact, the proper functioning of the planet's ecosystems and of our common planetary home as a whole requires all species, including "fungi, algae, worms, insects, reptiles and an innumerable variety of microorganisms." The pope notes how "some less numerous species, although generally unseen, nonetheless play a critical role in maintaining the equilibrium of a particular place" (34). While discussing biodiversity, the encyclical also refers to the oceans which "not only contain the bulk of our planet's water supply, but also most of the immense variety of living creatures, many of them still unknown to us and threatened for various reasons." According to the pope, "Particularly threatened are marine organisms which we tend to overlook, like some forms of plankton; they represent a significant element in the ocean food chain, and species used for our food ultimately depend on them" (40). The pope is especially

sensitive to the alarming state of the world's coral reefs and uses an appropriate quote from the pastoral letter of the bishops of the Philippines:

In tropical and subtropical seas, we find coral reefs comparable to the great forests on dry land, for they shelter approximately a million species, including fish, crabs, molluscs, sponges and algae. Many of the world's coral reefs are already barren or in a state of constant decline. "Who turned the wonderworld of the seas into underwater cemeteries bereft of colour and life?"¹⁶ (41)

In presenting the multiple physical manifestations of the contemporary ecological crisis, *Laudato Si'* succeeds in driving home a strong message about the magnitude of the precarious situation of our common home. The crisis of our common home is not just climate change or any other singular phenomenon. Our common home is pulled down by several interlinked physical crises.

The Specter of Leaving an Uninhabitable Home to Future Generations

Today the capacity of the earth to be truly a home for all of humanity and for all living beings is increasingly placed in jeopardy. As Pope Francis points out, "Never have we so hurt and mistreated our common home as we have in the last two hundred years" (53). We are destroying our own common home! We are also playing a huge and mindless gamble with the future of our common planetary home and of our fellow

16. Catholic Bishops' Conference of the Philippines, Pastoral Letter *What is Happening to our Beautiful Land?* (29 January 1988).

human beings—especially the future generations—and of our fellow species, members of our common household. The closing lines of the London Geological Society’s 2010 statement on climate change would be appropriate to remember here: “Many climate change processes have long time lags, so future generations will have to deal with the consequences. Recovery of the earth’s climate in the absence of any mitigation measures could take 100,000 years or more, which is indeed a dreadful possibility.”¹⁷ On a similar note, it may be remembered that the fate of biological diversity on Earth for the next ten million years will almost certainly be determined during the next fifty to one hundred years by the activities of a single species—the *Homo sapiens* which has unwittingly achieved the ability to directly affect its own fate and that of most of the other species on this planet.¹⁸ We are indeed recklessly gambling with the future of our common home. As Seán McDonagh writes, “The stakes are very high. In fact, they could not be higher!”¹⁹

Pope Francis is critical of those who deny or remain indifferent to the crisis of our common home. He judges such attitudes to be grossly irresponsible:

As often occurs in periods of deep crisis which require bold decisions, we are tempted to think that what is happening is not entirely clear. Superficially, apart from a few obvious

17. The Geological Society, *Climate Change: Evidence from the Geological Record; A Statement from the Geological Society of London* (November 2010), 7.

18. See Paul Ehrlich and Robert M. Pringle, “Where Does Biodiversity Go from Here? A Grim Business-as-usual Forecast and a Hopeful Portfolio of Partial Solutions,” *Proceedings of the National Academy of Sciences* 105 (2008), 11579.

19. Seán McDonagh, *On Care for Our Common Home Laudato Si’: The Encyclical of Pope Francis on the Environment* (New York: Orbis, 2016), 142.

signs of pollution and deterioration, things do not look that serious, and the planet could continue as it is for some time. Such evasiveness serves as a licence to carrying on with our present lifestyles and models of production and consumption. This is the way human beings contrive to feed their self-destructive vices: trying not to see them, trying not to acknowledge them, delaying the important decisions and pretending that nothing will happen. (59)

Against the alarming situation of our common planetary home, Pope Francis asks emphatically: "What kind of world do we want to leave to those who come after us, to children who are now growing up?" As the pope notes, "leaving an uninhabitable planet to future generations" is indeed a dreadful heritage that our present generation may end up with (160).

Doomsday predictions can no longer be met with irony or disdain. We may well be leaving the coming generations debris, desolation and filth. The pace of consumption, waste and environmental change has so stretched the planet's capacity that our contemporary lifestyle, unsustainable as it is, can only precipitate catastrophes, such as those which even now periodically occur in different areas of the world (161).

Our common home is in grave peril today. *Laudato Si'* is therefore precisely about "care for our common home."