

## Responding to Small Island Nations Imperiled by Human-Forced Climate Change: An Ethical Imperative for Christians

JAME SCHAEFER\*

*Small island nations are increasingly imperiled by larger nations that are emitting most of the greenhouse gases, forcing changes in the global climate, and causing catastrophic ecological and social problems. Among the most adversely affected people are islanders who are suffering immense health, economic, and cultural injustices that should be addressed at all levels of governance. Leaders of Anglican, Eastern Orthodox, and Roman Catholic denominations have been responding meaningfully to the plight of the small island nations by drawing motivation from their theological traditions for mitigating the problems and calling all Christians to act individually, collectively within their parishes, and collaboratively in the public square.*

*The rising sea-level is the biggest temporal  
challenge our church has ever faced.  
For me, it is my calling as a Christian  
and a believer in God to talk, preach and raise  
awareness about the injustices this issue poses  
while helping my people grieve the very  
real possibility of a diaspora of Tuvaluans scattered  
around the world as refugees.*

Tafue Mola Lusama, General Secretary of the Tuvalu Christian Church<sup>1</sup>

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\* Jame Schaefer teaches at Marquette University where she relates theology, the natural sciences, and technology. Her publications include *Theological Foundations for Environmental Ethics*, *Confronting the Climate Crisis: Catholic Theological Perspectives*, and the inaugural “Animals” entry in *New Catholic Encyclopedia*. She collaborated with other scholars in drafting *Healing Earth*, an online environmental science textbook available at <http://healingearth.ijep.net/> and currently co-leads the Best Practices Guidelines Project for the Religion and Conservation Biology Working Group of the Society for Conservation Biology.

<sup>1</sup> T. Mola Lusama, “Knee-Deep in Reality: A First-Hand Christian Account of the Real Impacts of Rising Oceans upon the Land, Families, Churches in the Fragile Island Communities of the South Pacific,” Tuvalu Christian Church, 2015, [http://www.oceanethicscampaign.org/uploads/8/3/1/7/8317548/church\\_in\\_island\\_of\\_tuvalu.pdf](http://www.oceanethicscampaign.org/uploads/8/3/1/7/8317548/church_in_island_of_tuvalu.pdf).

The plight of small island nations in oceans throughout the world manifests the perilous effects of human-forced climate change. Recognized by the Intergovernmental Panel on Climate Change (IPCC)<sup>2</sup> since 1990 as a problem that requires extensive mitigation and adaptation strategies, responses are warranted at all levels of governance by policy makers and by people who profess faith in God. Christian responses will be most effective when well informed about the problem, its ethical implications, faith-based reasons for responding, and actions that have been initiated. From this cumulative perspective, prudent decisions can be made by faith-filled individuals and communities to confront prevailing injustices.

### *Small Island Nations in Peril*

Though climatologists and other scientists recognize that some terrestrial and extraterrestrial factors are primarily responsible for most of the past episodes of climate change,<sup>3</sup> these factors cannot fully account for the adverse effects on islands that are occurring today and predicted to occur in the near future. The peer-reviewed scientific, technical, and socioeconomic reports by experts throughout the world upon which the IPCC relies point conclusively to greenhouse gases emitted from burning fossil fuels as the culprit for the rapid rise in the temperature of Earth—approximately 2 degrees Fahrenheit since the late nineteenth century, with most occurring within the last thirty-five years.<sup>4</sup> The largest growth in these gaseous emissions comes from energy production, other industries, and transportation, while gases

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<sup>2</sup> Established in 1988 by the United Nations Environment Programme (UNEP) and the World Meteorological Organization (WMO) “to provide the world with a clear scientific view on the current state of knowledge in climate change,” the IPCC “provides policymakers with regular assessments of the scientific basis of climate change, its impacts and future risks, and options for adaptation and mitigation.” IPCC, “Organization,” <http://ipcc.ch/organization/organization.shtml>.

<sup>3</sup> Extraterrestrial factors include solar output, Earth-Sun geometry, and interstellar dust, while terrestrial factors from oceans, the atmosphere, and land include volcanic emissions, mountain-building, continental drift, atmospheric chemistry, atmospheric reflectivity, land reflectivity, and atmosphere/ocean heat exchange. Physical Geography.net, 2010, <http://www.physicalgeography.net/>.

<sup>4</sup> IPCC, *Climate Change 2014 Synthesis Report Summary for Policymakers*, 2, [http://ipcc.ch/pdf/assessment-report/ar5/syr/AR5\\_SYR\\_FINAL\\_SPM.pdf](http://ipcc.ch/pdf/assessment-report/ar5/syr/AR5_SYR_FINAL_SPM.pdf). NASA Global Climate Change: Vital Signs of the Planet, “Scientific Consensus: Earth’s Climate is Warming,” August 31, 2017, <https://climate.nasa.gov/scientific-consensus/>. Greenhouse gases are primarily carbon dioxide, methane, and nitrous oxide. Climate scientists gather their data from various sources, including ice cores that span thou-

from residential and commercial buildings, deforestation, and agriculture have been growing at a lower rate.<sup>5</sup> Human activities are *driving* changes in the global climate that exceed the effects caused by natural factors.

The major manifestations of temperature change on and around small island nations are:

1. Rising sea levels due to melting glaciers, snowpack, sea ice, and freshwater ice inundating the islands and adversely affecting the islanders, other species, abiotica, and ecological systems. Over the last century, the global sea level rose approximately eight inches—the greatest increase occurring during the last two decades.<sup>6</sup> Sea level rise combined with extreme weather events (primarily more intense hurricanes and heavy rains) constitute the most immediate threat to the islands and their inhabitants. Islanders are forced to move to higher ground within their islands or to other nations. Analysts have attempted the complicated task of estimating the numbers of persons who might be displaced and concluded that a broad range of 25 million to one billion people might have to be relocated by 2050. Successive reports by researchers have argued that climate change “is poised to become a major driver of population displacement—a crisis in the making.”<sup>7</sup>
2. Warming of the ocean water.<sup>8</sup> The warmer water puts coastal communities at risk, increases infrastructure costs, threatens

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sands of years, tree rings, the extent of mountain glaciers, changes in coral reefs, and pollen in lake beds.

<sup>5</sup> 1990–2015 sector estimates in the United States are available in U.S. Environmental Protection Agency (EPA), “Inventory of U.S. Greenhouse Gas Emissions and Sinks,” EPA 430-R-16-002, <https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks>.

<sup>6</sup> NASA Sea Level Change: Observations from Space, “Understanding Sea Level Change,” <https://sealevel.nasa.gov/understanding-sea-level>.

<sup>7</sup> O. Brown, *Migration and Climate Change*, IOM Migration Research Series 13 (Geneva: IOM Publications, 2008), 11. See also United Nations Secretariat, Office of the High Representative for the Least Developed Countries Landlocked Developing Countries and Small Island Developing States (UN-OHRLLS), *Small Island Developing States in Numbers: Climate Change Edition 2015*, 18, [https://sustainabledevelopment.un.org/content/documents/2189SIDS-IN-NUMBERS-CLIMATE-CHANGE-EDITION\\_2015.pdf](https://sustainabledevelopment.un.org/content/documents/2189SIDS-IN-NUMBERS-CLIMATE-CHANGE-EDITION_2015.pdf).

<sup>8</sup> NASA Global Climate Change: Vital Signs of the Planet, “Climate Change: How Do We Know,” <https://climate.nasa.gov/evidence/>.

- coral reefs and fisheries, and accelerates the overall global warming trend.<sup>9</sup>
3. Increasingly acidic ocean water invading the island interiors. As oceans absorb greenhouse gases and the sea level rises, the acidic water is invading inland, contaminating freshwater essential to the survival of islanders, other animals, and vegetation, and severely inhibiting the growth, resilience, and functioning of the coral reefs that break waves, slow beach erosion, support biological diversity, and attract tourists.<sup>10</sup> The degraded reefs off the coast of Carteret Island have been unable to halt the intrusion of salt water that is killing staple crops and making the land unfarmable.<sup>11</sup> The reefs of Grenada, Comoros, Vanuatu, Kiribati, and Fiji are most vulnerable to coral reef degradation.<sup>12</sup>
  4. Loss of biological diversity. Corals, flora, and fauna are imperiled at alarming rates. Coral bleaching is accelerating and projected to increase significantly across the Pacific and in the Caribbean where biological diversity is decreasing rapidly. This loss has become highly problematic for research underway in the Kiribati's Phoenix Island Protected Area where increasing ocean acidification and inundation of the land and groundwater hamper efforts to understand the impacts of coral bleaching, climate change, and the resilience of tropical reef systems.<sup>13</sup>

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<sup>9</sup> Union of Concerned Scientists (UCS), "Climate Hot Map," <http://www.climatehotmap.org/global-warming-effects/ocean-temperature.html>.

<sup>10</sup> NASA Earth Observatory, "Effects of Changing the Carbon Cycle," <https://www.earthobservatory.nasa.gov/Features/CarbonCycle/page5.php>; NOAA PMEL Carbon Program, "What Is Ocean Acidification?" <https://www.pmel.noaa.gov/co2/story/What+is+Ocean+Acidification%3F>; R. K. Pachauri and L. A. Meyer, eds., *Climate Change 2014: Synthesis Report; Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, (Geneva: IPC, 2014), 14, 52.

<sup>11</sup> Carteret islanders explain their plight poignantly in "Global Warming and the Carteret Islands," August 29, 2007, [https://www.youtube.com/watch?feature=player\\_embedded&v=2o2AapO6rK8](https://www.youtube.com/watch?feature=player_embedded&v=2o2AapO6rK8).

<sup>12</sup> UN-OHRLLS, *Small Island Developing States in Numbers*, 25; Lauretta Burke, Katie Reytar, Mark Spaulding, and Alison Perry, *Reefs at Risk Revisited* (Washington, D.C.: World Resources Institute, 2011), 7.

<sup>13</sup> Phoenix Islands Protected Area, "Threats," <http://phoenixislands.org/threats.php>.

5. Potable water scarcity. Access to a reliable, safe, and sustainable supply of drinking water is vital to the small island nations, some of which rely upon a single source. As coastal aquifers and groundwater are contaminated with increasingly acidic ocean waters, communities that depend primarily on rainwater for their freshwater needs are particularly vulnerable to changes in precipitation patterns and prolonged drought conditions.<sup>14</sup>
6. Health risks and susceptibility to diseases. Among these are malnutrition due to the destruction of staple crops and diminished fisheries by inundating acidic sea water, deaths, and injuries due to intense hurricanes, and diarrheal and other waterborne diseases. Poor islanders are most vulnerable to these problems and require education, health care programs, and public health initiatives to mitigate and prevent more adverse effects.<sup>15</sup>
7. Economies in jeopardy, thereby inhibiting the islanders' access to the necessities of life and thwarting their ability to lift themselves out of poverty. Islanders rely on fisheries and tourism for their livelihoods, and have to bear the financial cost of adapting to sea level rise when they suffer the adverse effects of sea level rise.<sup>16</sup> The already high cost of importing food to replace the diminished fish and crops is increasing.<sup>17</sup> Complicating these dire economic conditions is the fact that a majority of the islanders' communities, island infrastructure, and economic activities are located in low-lying coastal areas. The islanders have scarce resources and little technology to adapt.
8. Risks to cultural and natural history sites. The World Heritage Convention designated thirty-four areas of these nations that meet at least one of the ten criteria for preserving sites that have "outstanding universal value" and should be

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<sup>14</sup> UN-OHRLLS, *Small Island Developing States*, 25–27.

<sup>15</sup> UN-OHRLLS, *Small Island Developing States*, 31.

<sup>16</sup> UNEP Newscentre, "Sea-Level Rise in Small Island Nations—Up to Four Times the Global Average—to Cost US\$ Trillions Annual Economic Loss and Impede Future Development: Shift to Green Policies and Investment Critical," June 5, 2014, <http://www.unep.org/newscentre/sea-level-rise-small-island-nations-four-times-global-average-cost-us-trillions-annual-economic-loss>.

<sup>17</sup> UN-OHRLLS, *Small Island Developing States*, 37.

protected from the ravages of human-forced climate change. Especially significant for protecting these sites is the traditional knowledge of the island cultures that builds resilience to changes in the climate and aims for a sustainable future.<sup>18</sup> Though the islanders are key transmitters of the significance of these cultural and natural sites, they are unequipped economically and technologically to protect their sites.<sup>19</sup>

9. Islanders forced from their spiritually significant ancestral lands and relocating to areas occupied by and sacred to others. Fleeing people constitute a new category of the oppressed—climate refugees. Lusama’s Tuvaese and the Carteret islanders are among the first climate refugees.<sup>20</sup>
10. Unevenly distributed risks of human-forced climate change. As the latest IPCC report underscored, the risks to humans and natural systems are “generally greater for disadvantaged people and communities in countries at all levels of development.”<sup>21</sup> The small island nations that cumulatively emit 1 percent of the greenhouse gases are severely afflicted by the 99 percent other nations are emitting.<sup>22</sup>

These islanders are diverse people of many different religions, spiritualities, and races who speak hundreds of different languages and dialects and are among the poorest people in the world. Yet their islands are some of the most beautiful places on Earth, with atolls of white sand beaches, mountain ranges covered in cloud forests, historic ports and towns, and agricultural landscapes. These small island nations are relatively remote, vulnerable to climate change and other

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<sup>18</sup> UNESCO World Heritage Convention, “Climate Change and World Heritage,” <http://whc.unesco.org/en/climatechange>.

<sup>19</sup> Seremaiah Matai, Statement at UN Oceans Conference, New York, June 6, 2017, <https://sustainabledevelopment.un.org/content/documents/24144vanuatu.pdf>. Matai is Minister for Agriculture, Livestock, Forestry, Fisheries and Bio-security of Vanuatu.

<sup>20</sup> “The World’s First Climate Refugees,” December 25, 2015, <https://www.youtube.com/watch?v=b6QEDbI5zrg>; Vlad Sokhin’s “Warm Waters,” <https://vimeo.com/167544121>; R. Nuwer, “The World’s First Climate Change Refugees Were Granted Residency in New Zealand,” *Smithsonian.com*, August 7, 2014, <http://www.smithsonianmag.com/smart-news/worlds-first-climate-change-refugees-were-just-granted-residency-new-zealand-180952279/#FJ8heSzPyDTtPhwD.99>; and “Global Warming and the Carteret Islands.”

<sup>21</sup> IPCC, *Climate Change 2014*, 13.

<sup>22</sup> IPCC, *Climate Change 2014*, 67.

environment problems, and generally small in size (for example, Tuvalu's total land area is approximately ten square miles). They constitute a combined population of around 65 million people and suffer disproportionately from the damaging effects of human-forced climate change.<sup>23</sup> These small island nations are located throughout the Pacific, the Indian Ocean, the South China Sea, and the Caribbean.<sup>24</sup>

### *Ethical Implications and Theological Responses*

What ethical concerns surface from these manifestations of human-forced climate change on small island nations? How have Christian leaders and communities responded?

#### *Ethical Issues*

Many injustices loom large when realizing the plight of these small island nations attributed to human-forced climate change. Foundational to all injustices is the disproportionality of greenhouse gas emissions.<sup>25</sup> The least emitters are the most oppressed—an oppression inflicted by a vast majority on a tiny minority without its consent. The islanders are also among the poorest of the poor. They are the most vulnerable. They are the most afflicted. They should be protected and assisted in their plight by their oppressors. Unless the vast numbers of emitters care about and for the islands' poor, this social injustice will prevail.<sup>26</sup>

An economic injustice also persists. The islanders are least able to afford adapting to the changes in the global climate that the vast majority of others are forcing. If an island nation has higher ground to which the islanders can move when inundated with acidic water, the cost and knowledge of adaptation methods, technologies, infrastructure, and movement are beyond the financial resources of the islanders. If they have to relocate beyond their national boundaries, the social and cultural costs are difficult to assess due to their

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<sup>23</sup> Climate Change Secretariat, *Climate Change: Small Island Developing States*, United Nations Framework Convention on Climate Change, 3-6 (Bonn, Germany: UNFCCC, 2005).

<sup>24</sup> Climate Change Secretariat, *Climate Change: Small Island Developing States*, 3. For a map of the imperiled island nations, see "Small Island Developing States," [http://www.scidev.net/filemanager/root/site\\_assets/spotlights/sids\\_oceans/sids-map\\_fileminimizer\\_.jpg](http://www.scidev.net/filemanager/root/site_assets/spotlights/sids_oceans/sids-map_fileminimizer_.jpg).

<sup>25</sup> UNEP, "Sea-Level Rise in Small Island Nations."

<sup>26</sup> UNEP, "Sea-Level Rise in Small Island Nations."

more-than-monetary complexity. The cultural injustice is beyond calculation.<sup>27</sup> How can the loss of ancestral lands be calculated in numbers? The places of spiritual significance unique to each island state? Burial grounds steeped in traditions? Historical places from which they trace the meaning of their existence?

Injustices to the land, waters, species, and ecological systems must also be recognized and considered: Increasingly acidic sea water inundating the land; contaminated fresh surface water and ground water; degraded coral reefs and bleached corals; destroyed coconut and other trees; and, disrupted functioning of marine ecological systems. Land injustice. Water injustice. Species injustice. Ecosystem injustice. And, of course, Earth injustice. All are inhibited from functioning according to their innate capabilities.

Finally, intergenerational injustice reigns. Manifested by the ongoing plight of small island nations, human-forced climate change threatens an impoverished planet in the future that cannot support diverse life, culture, and civilization.

#### *Theological Responses by Leaders of Christian Denominations*

Responding from their faith perspective that the world is totally contingent upon God for its existence, leaders of Christian denominations have addressed the realities and threats of human-forced climate change. Among their key shared reasons are (1) the universe—the creation—is a gift from God that should be accepted with gratitude; (2) humans are interconnected with all other creatures made possible by God; (3) concern for poor and vulnerable people must take precedence when making decisions; (4) future generations deserve to inherit a life-flourishing common home; and (5) all people and nations must collaborate in mitigating the threat of a life-impoverished Earth. Though many religious leaders have committed to this goal, some specifically in response to the plight of small island nations, I highlight Anglican/Episcopal, Eastern Orthodox, and Roman Catholic responses.

#### *Earth as God's Gift—a Blessing to Receive with Gratitude and Responsibility*

Katharine Jefferts Schori, former presiding bishop of the Episcopal Church, describes the diverse creation as a “multicultural,

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<sup>27</sup> Matai, Statement at UN Oceans Conference.



multivalent blessing” from God.<sup>28</sup> For Anglican Archbishop Winston Halapua, “the gift of creation” reflects the belief that humans and all living entities have their origins in God and are deeply connected with “the God of life who nurtures life.”<sup>29</sup> Ecumenical Patriarch Bartholomew describes the “web of life” as “a sacred gift of God—ever so precious, yet ever so delicate,”<sup>30</sup> considers the oceans, coastal waters, seas, and estuaries as abounding with “the gift of life,”<sup>31</sup> and laments the failure to see Earth as “a gift inherited from above.”<sup>32</sup> Building upon statements by his predecessors, Pope Francis describes the world as “a gift from the outstretched hand of the Father of all,” “a shared inheritance” that God intends for the sustainability of all, and “a common good” of present and future generations.<sup>33</sup>

Permeating the teachings of these prelates is their faith perspective that God who gifts and sustains the world in existence is present in and through it. As Margaret Bullitt-Jonas, Episcopal priest and Missioner for Creation Care, exclaims:

God’s love and presence are everywhere—not just in church, not just inside a sanctuary built by human hands, but also outside, in the sea and sky, in the humble tomato plant valiantly trying to grow in my shady garden. The crucified, risen and ascended Christ fills all things, sustains all things, and redeems all things.<sup>34</sup>

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<sup>28</sup> Katharine Jefferts Schori, “Opening Address,” Diocese of Hawai‘i Sesquicentennial, November 2, 2012, Honolulu. Cited from Episcopal News Service, “Presiding Bishop Preaches, Delivers Convention Address in Hawai‘I,” November 12, 2012, <http://episcopaldigitalnetwork.com/ens/2012/11/12/presiding-bishop-preaches-delivers-convention-address-in-hawaii/>.

<sup>29</sup> Winston Halapua, *Waves of God’s Embrace: Sacred Perspectives from the Ocean* (Norwich, U.K.: Canterbury Press, 2008), 33. He is one of three Co-Archbishops of the Anglican Church in Aotearoa, New Zealand, and Polynesia.

<sup>30</sup> Patriarch Bartholomew, “Environmental Justice and Peace,” <https://www.patriarchate.org/bartholomew-quotes>.

<sup>31</sup> Patriarch Bartholomew, “Declaration by His All Holiness Ecumenical Patriarch Bartholomew on the Eve of World Oceans Day (2003),” Stockholm, Sweden, June 7, 2003, [http://www.orth-transfiguration.org/wp-content/uploads/2016/05/Library\\_Ecumenical-Patriarch-Bartholomew\\_declaration-on-word-ocean-day.pdf](http://www.orth-transfiguration.org/wp-content/uploads/2016/05/Library_Ecumenical-Patriarch-Bartholomew_declaration-on-word-ocean-day.pdf).

<sup>32</sup> Patriarch Bartholomew, “Environmental Justice and Peace.”

<sup>33</sup> Pope Francis, *Laudato si’, On Care for Our Common Home*, Encyclical Letter, Vatican City, May 24, 2015, 76, 93, 23; [http://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco\\_20150524\\_encyclica-laudato-si.html](http://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_encyclica-laudato-si.html).

<sup>34</sup> Margaret Bullitt-Jonas, “Sacred Earth, Sacred Trust,” Sermon, St. John’s Episcopal Church, Ashfield, Mass., June 12, 2016, <http://revivingcreation.org/sacred-earth-sacred-trust/>.

Patriarch Bartholomew's homilies and articles are permeated with the understanding that God's creation is revelatory of God, the "book of nature" that the faithful should read with gratitude.<sup>35</sup> In his 2015 encyclical, *Laudato si', On Care for Our Common Home*, Pope Francis approaches the visible world as revelatory of God's character, with each creature reflecting "in its own way a ray of God's infinite wisdom and goodness" (#69). God is the writer of "a precious book" in which no creature is excluded from this "continuing revelation of the divine" (#85). The pope encourages contemplating "the importance and meaning of each creature" within "the entirety of God's plan" (#86).

Faith that the world is God's gift through which God can be known should motivate expressions of gratitude in word and action. For Jefferts Schori, God's blessing of the world should encourage hospitality and helping one another "discover where gifts have already been given," having "appropriate pride in the way God has created each one of us," and learning "new ways of stewarding all the gifts of creation." Among these new ways are using these gifts "more wisely through listening more deeply to the voiceless around us, groaning in travail—both the human beings most affected by weather extremes, job loss, changing economies, and the non-human creation."<sup>36</sup> Reflecting on the Genesis stories of creation, she anticipates understanding "the planetary garden as home" will help us realize that "our work is much more about housekeeping and husbanding all life in the garden for the good of the whole."<sup>37</sup>

Archbishop Halapua explores the "deep appreciation, conscious or unconscious, that our life and all things around us are gifts" inherent in the Oceanic worldview. It helps us recognize our responsibility "to live out of abundant generosity" through which "people may contribute to each other what is lacking in any situation."<sup>38</sup> He laments the effects of greenhouse gases on Tuvalu that manifest the abuse of God's gifts of creation and signify a failure to live out of abundant generosity.

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<sup>35</sup> Patriarch Bartholomew, "Reading the Book of Nature," in John Chryssavgis, ed., *On Earth as in Heaven: Ecological Vision and Initiatives of Ecumenical Patriarch Bartholomew* (New York: Fordham University Press, 2012), 128–142.

<sup>36</sup> Jefferts Schori, "Opening Address."

<sup>37</sup> Jefferts Schori, "Created for Abundance," St. Mary's Episcopal Church, Eugene, Ore., September 11, 2016.

<sup>38</sup> Halapua, *Waves of God's Embrace*, 35–36.

Patriarch Bartholomew urges serving our neighbor and preserving the world “with both humility and generosity, in a perspective of frugality and solidarity.”<sup>39</sup> Underscoring our responsibility for remedying what we have imperiled, he calls for prudence, compassion, justice, and fairness toward the gift of creation that God has entrusted to us. He appeals “to all people of goodwill to consider ways of living less wastefully and more frugally, manifesting less greed and more generosity for the protection of God’s world and the benefit of His people.”<sup>40</sup> He alerts us to the gifts that the oceans provide and tells us how essential they are to human well-being, biological diversity, and the stability of the global climate. And, he reminds us that we are accountable for the dire conditions of the oceans that we have caused but are capable of remedying.

Throughout *Laudato si’*, Pope Francis underscores the responsibility that faith-filled people have for expressing gratitude to God for the “loving gift” of the world by imitating God’s “generosity” through “self-sacrifice and good works” (#220). We need to restrain ourselves when using the goods of Earth, assure that all people are able to sustain themselves in the present, and make decisions that are conducive to future generations’ inheriting a life-supporting planetary home (#159–160). Christians realize that “their responsibility within creation, and their duty towards nature and the Creator, are an essential part of their faith” (#64). He focuses an entire chapter on the “ample motivation” that the Christian tradition provides for responding to ongoing ecological perils (#62–100), and he encourages people of other faiths to return to the sources of their traditions for inspiration (#200). According to Pope Francis, failing to act responsibly ruins the person’s relationship with himself or herself, with others, with God, and with the Earth (#70). He encourages “little daily activities of environmental responsibility” (#211), correcting irresponsible use and abuse of God’s creation (#2, 6), inventorying and safeguarding species (#42), and advocating the legislation and implementation of ecologically protective laws (#38). He characterizes responsible persons as “selfless” (#181).

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<sup>39</sup> Patriarch Bartholomew, “Environmental Justice and Peace.”

<sup>40</sup> Patriarch Bartholomew, “Exclusive: Patriarch Bartholomew on Pope Francis’s Climate Encyclical,” *Time*, June 18, 2015, <http://time.com/3926076/pope-francis-encyclical-patriarch-bartholomew/>.

### The Connectedness of All Creatures—Correcting Misconstrued Anthropocentrism

Anglican, Eastern Orthodox, and Roman Catholic leaders readily accept the reality of the interconnectedness of all creatures that God made possible. Their perspective is informed by basic scientific findings about the universe out of which life and eventually humans emerged. They also recognize human dependence on the waters, land, air, and other species for our health and well-being.

Thus, as Jefferts Schori observes, that all creatures are connected is a “central truth.” She continues:

We are part of the whole; we’re not in charge of the whole, and whatever our socioeconomic status, we cannot avoid the destruction that results from misusing the whole. The choice is ours—we can continue the self-centered death spiral, or we can encourage the death of self-centeredness within us and our communities, and learn to live far more abundantly for the health and wholeness of the entire creation. In that indeed will God be glorified.<sup>41</sup>

Bullitt-Jonas adds movingly:

Whenever you and I re-awaken to God’s presence in Ashfield’s hills and woods, in the grasses and dirt beneath our feet and in the stars overhead, we discover again that we are connected not only to other human beings but also to everything else. We are part of the web of life: connected by our breath, blood, flesh, and bone to the whole creation.<sup>42</sup>

Archbishop Desmond Tutu underscores Earth as the source of human well-being. As Bullitt-Jonas comments, Tutu reminds us that the loss of our deep connection to Earth is at “the heart of our failure to tackle climate change.”<sup>43</sup> Halapua appeals from a Polynesian context, “As human beings may we grow in our understanding that we are interconnected with the environment and that the gifts of creation

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<sup>41</sup> Jefferts Schori, “Created for Abundance.”

<sup>42</sup> Bullitt-Jonas, “Sacred Earth, Sacred Trust.”

<sup>43</sup> Bullitt-Jonas, “Sacred Earth, Sacred Trust.”

are not to be abused but are to be honored and shared.”<sup>44</sup> “We are part of one another,” he emphasizes, embraced by God’s love that he describes as “world-encompassing, interconnecting,” “life-giving, dynamic and embracing.” His analogy of God as ocean—*theomoana*—provides a meaningful way in which islanders think about God who unifies and gives life to all.<sup>45</sup>

Patriarch Bartholomew views water as a unifier upon which all life depends for nourishment:

All life depends on its nourishing power. Flowing water makes our planet unique among all the planets, as we know, in the universe. Water is a source of wonder and beauty, a cause of celebration and connection. Water cradles us from our birth, sustains us in life, and heals us in sickness. It delights us in play, enlivens our spirit, purifies our body, and refreshes our mind. We share the miracle of water with the entire community of life. Indeed, each of us is a microcosm of the oceans that sustains life.<sup>46</sup>

He describes the oceans as “God’s vast blue Creation” and alerts us to the fact that the harm we cause to the oceans also harms God’s other creations, including ourselves. They are essential to sustaining our bodies, our minds, our hearts, and our spirits, he reminds us, and we should recognize that the oceans, even in their vastness, are affected by the callous ignorance of humans.<sup>47</sup>

Speaking at the United Nations on behalf of Pope Francis, Peter Cardinal Turkson teaches that the “environment cannot be regarded as something separate from ourselves or as a mere setting in which we live. We are part of it, included in it and in constant interaction with it.”<sup>48</sup> That everything is connected is an underlying theme of *Laudato si’* in which the pope insists that biblical sources do not condone “a tyrannical anthropocentrism unconcerned for other creatures” (#68)

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<sup>44</sup> Halapua, *Waves of God’s Embrace*, 39.

<sup>45</sup> Halapua, *Waves of God’s Embrace*, 92.

<sup>46</sup> Patriarch Bartholomew, “Declaration on the Eve of World Oceans Day.”

<sup>47</sup> Patriarch Bartholomew, “Declaration on the Eve of World Oceans Day.”

<sup>48</sup> Peter Cardinal Turkson, “Statement,” United Nations Conference to Support the Implementation of SDG 14: Conserve and Sustainably Use the Oceans, Seas and Marine Resources for Sustainable Development, June 7, 2017, <https://holyseemission.org/contents//statements/593810d1a56d8.php>.

and that catechetical sources “criticize a distorted anthropocentrism” (#69). His lauding from traditional theological sources the intrinsic value of other species according to their natures and attributing intrinsic value to ecological systems and the Earth (#140) dispels a strictly human-centered approach to valuing and functioning within our common home.

#### Effect on Everyone—Especially the Poor and Vulnerable

Because Christianity is grounded in the teachings and ministry of Jesus the Christ, followers are expected to image his inclusiveness and preference for the poor and vulnerable when making decisions and acting. Anglican, Eastern Orthodox, and Roman Catholic teachers underscore this preference, so the plight of the small island nations, their people, and the ecosystems within which they function is highly disconcerting.

Halapua’s deep concern for islanders is obvious throughout his writings. The hardships that Tuvalu has faced, is facing, and is threatened to face to the point of the island’s extinction constitute a “betrayal” of a small island and islanders who had lived sustainably for centuries. He attributes their plight to the “abuse of the precious gifts of creation” by industrial nations who spew greenhouse gases.<sup>49</sup>

Patriarch Bartholomew feels deeply for “the more vulnerable among us who depend on the oceans for food and sustenance” and who are experiencing the many adversities of rising sea levels.<sup>50</sup> Basic human rights are at risk when we fail to protect the oceans, he insists. “The way we defile the oceans is reflected in the way we exploit its resources, which is directly related to the way we treat our fellow human beings, particularly the marginalized and less fortunate of our brothers and sisters.”<sup>51</sup>

Pope Francis agrees unequivocally. The ecological crisis is a social crisis. Throughout *Laudato si’*, he points to the imperative to address the causes of ecological degradation that also degrade humans and their societies. Among the manifestations he references are diminishing reserves of fish that especially hurt small fishing communities,

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<sup>49</sup> Halapua, *Waves of God’s Embrace*, 38–39.

<sup>50</sup> Patriarch Bartholomew, “Message by His All-Holiness Ecumenical Patriarch Bartholomew for World Oceans Day,” June 8, 2016, <https://www.patriarchate.org/-/message-by-his-all-holiness-ecumenical-patriarch-bartholomew-for-world-oceans-d-1>.

<sup>51</sup> Patriarch Bartholomew, “Message for World Oceans Day.”

water pollution that especially affects the poor who cannot buy bottled water, and rises in the sea level that mainly affect “impoverished coastal populations who have nowhere else to go” (#48). Speaking at a United Nations conference, Turkson urged increasing economic benefits to small-scale fishers and access to marine resources and markets.<sup>52</sup> He also praised the “rich cultural and religious traditions” of the small island nations, their sense of “universal solidarity,” and their “ethical imperative that no one should be left behind.”<sup>53</sup>

### Responsibility to Future Generations

Tutu attributes the climate crisis to an economic system that is propelled by greed and must be corrected “for the sake of our children and our children’s children.”<sup>54</sup> According to Pope Francis, adopting an ethical approach to address the ecological-social crisis inspires a spirit of “intergenerational solidarity” that is “not optional.” Solidarity with future generations is “a basic question of justice, since the world we have received also belongs to those who will follow us” (#159). Though caring for the oceans may benefit us immediately, Turkson urged regarding them as “a gift to future generations, sparing them from paying the extremely high price of environmental deterioration and allowing them to enjoy its beauty, wonder, and manifold endowment.”<sup>55</sup> In a joint statement on the 2017 Day of Prayer for the Care of Creation, Patriarch Bartholomew and Pope Francis pledged their “commitment to its care and preservation for the sake of future generations.”<sup>56</sup>

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<sup>52</sup> Peter Cardinal Turkson, “Intervention,” Ocean Conference: Increasing Economic Benefits To Small Islands Developing States, United Nations Conference to Support the Implementation of SDG 14: Conserve and Sustainably Use the Oceans, Seas and Marine Resources for Sustainable Development, June 7, 2017, <https://holysemission.org/contents/statements/59387a41a4fd2.php>.

<sup>53</sup> Turkson, “Intervention.”

<sup>54</sup> Quoted in Jo Confino, “The Power of Religion and Prayer to Head Off Climate Disaster,” *The Guardian*, September 17, 2014, <https://www.theguardian.com/sustainable-business/2014/sep/17/religion-prayer-climate-change-desmond-tutu>.

<sup>55</sup> Turkson, “Statement.”

<sup>56</sup> Pope Francis and Patriarch Bartholomew, “The Day of Prayer for the Care of Creation,” Vatican Radio, September 1, 2017, [http://en.radiovaticana.va/news/2017/09/01/the\\_day\\_of\\_prayer\\_for\\_the\\_care\\_of\\_creation\\_joint\\_message/1333983](http://en.radiovaticana.va/news/2017/09/01/the_day_of_prayer_for_the_care_of_creation_joint_message/1333983).

## Need for Dialogue, Collaboration, and an Integrated Agenda

Confident in the intellectual ability of humans to address the climate crisis, Patriarch Bartholomew recognizes that each of us has the choice of deciding whether or not to rectify the mistakes that have occurred. His caveat:

If we can find the faith to love each other and to love God, then we can find the faith to help His vast water planet live and flourish. On this eve of World Oceans Day, we invite all of you to join us in pledging to protect the oceans as an act of devotion, whatever your religion may be. If we love God, we must love His Creation.<sup>57</sup>

According to Jefferts Schori, “healing the illness of this planet is going to require the gifts and healing skills of the whole community.”<sup>58</sup> Pope Francis agrees, underscoring in *Laudato si’* the need for dialogue and collaboration at all levels of decision making, from individual to international, following “the principle of subsidiarity” (#157). Different perspectives are needed in an increasingly globalized and complex world, Turkson explains, and “all must be brought together to find the most effective solutions and measures” for achieving the common good. Particularly important are tasks “on the ground” that are sufficiently “practical and participative to stimulate the willingness of all to contribute.”<sup>59</sup> Bullitt-Jonas agrees, insisting that “every community and every sector of society” must work to reduce carbon emissions. She is encouraged by the “wave of religious protest and activism” throughout the world in response to “the cry of the Earth and the cry of the poor.”<sup>60</sup>

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<sup>57</sup> Patriarch Bartholomew, “Declaration on the Eve of World Oceans Day.”

<sup>58</sup> Jefferts Schori, “Created for Abundance.”

<sup>59</sup> Peter Cardinal Turkson, Panelist, Minimizing and Addressing Ocean Acidification, United Nations Conference to Support the Implementation of SDG 14, Partnership Dialogue 3, June 6, 2017, <https://holyseemission.org/contents//statements/5936f5fa3b980.php>.

<sup>60</sup> Bullitt-Jonas, “Sacred Earth, Sacred Trust” (allusion to Leonardo Boff’s *Cry of the Earth, Cry of the Poor* [Maryknoll, N.Y.: Orbis Books, 1997]).



*Interfaith and Religion-Marine Biology Collaboration*

Many statements have been issued by leaders of religions advocating action at the international level to reduce emissions of greenhouse gases.<sup>61</sup> Christian leaders are among the signatories. Some have also acted within the United States through appeals to elected officials concurrent with faith-motivated activities at regional levels.<sup>62</sup> Several efforts are underway in Roman Catholic dioceses to particularize and apply Pope Francis's encyclical, *Laudato si'*.<sup>63</sup>

Especially significant for addressing the plight of small island nations are efforts by the archdiocese of Brisbane's Catholic Justice and Peace Commission in collaboration with Ocean Conservancy. They are working together to identify and explain specific impacts of climate change on communities of the Pacific, other small island nations, and indigenous communities and to discuss ways communities of faith can respond to the effects of climate change.<sup>64</sup> The Catholic Bishops of Oceania also focus on protecting the oceans and the people who are dependent on them.<sup>65</sup> Lamenting with them, other bishops have urged the nations that emit most of the greenhouse gases to minimize their emissions and contribute proportionately to the Green Climate Fund established to help the small island nations adapt.<sup>66</sup>

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<sup>61</sup> Accessible from The Forum on Religion and Ecology, <http://fore.yale.edu/climate-change/statements-from-worldreligions/>; also "Statement of Faith and Spiritual Leaders on the Upcoming United Nations Climate Change Conference, COP21 in Paris in December 2015," <http://newsroom.unfccc.int/unfccc-newsroom/religious-leaders-call-for-effective-paris-agreement/>.

<sup>62</sup> Interfaith Power and Light, <http://www.interfaithpowerandlight.org/>; Catholic Climate Covenant, <http://www.catholicclimatecovenant.org/>.

<sup>63</sup> For example, the archdioceses of Atlanta, "*Laudato si'* Action Plan for the Archdiocese of Atlanta," <https://archatl.com/catholic-life/refreshatl/>; Seattle, "*Laudato si'* Parish Resources," <http://adw.org/creation-resources/>; and Milwaukee, "*Laudato si'*, *On Care for Our Common Home*: Discussion Guide and Parish Resources," <https://www.archmil.org/offices/social-justice/Laudato-Si-Discussion-Guide—More-Parish-Resources.htm>.

<sup>64</sup> ACCU Peace and Justice, "Webinar on Oceans and Vulnerable Populations," June 9, 2016, <https://accupj.wordpress.com/2016/06/09/join-catholic-climate-covenant-for-a-webinar-on-oceans-and-vulnerable-populations/>. See Ocean Conservancy's project at <https://oceanconservancy.org/climate/> and <https://oceanconservancy.org/ocean-acidification/>.

<sup>65</sup> Michael Otto, "Oceania Bishops Discuss Oceans, but also Visit Homeless, High School," *National Catholic Reporter*, August 15, 2017, <https://www.ncronline.org/news/environment/oceania-bishops-discuss-oceans-also-visit-homeless-high-school>.

<sup>66</sup> See, for example, the U.S. Conference of Catholic Bishops, "Letter to Congress on Green Climate Fund and Reducing Greenhouse Gas Emissions," October 28, 2015, <http://www.usccb.org/press-releases/2015/10/28/letter-to-congress-on-green-climate-fund-and-reducing-greenhouse-gas-emissions>.

Foundational to these appeals is the need for education on the connection between global climate change and burning fossil fuels. Key to educating people who profess faith in God are presenting the scientific facts and effects of global climate change, conveying theologically grounded rationales for motivating reflection and action, pointing to ethical issues that surface as the adverse effects of human-forced climate change are verified, stimulating ideas for mitigating these effects at individual to international levels of decision making, and implementing the ideas.<sup>67</sup>

Scientific societies are also reaching out to faith-based communities to encourage support for efforts aimed at mitigating the adverse effects of human-forced climate change. One example is the Society for Conservation Biology's Best Practices Project to provide guidelines for conservation researchers and practitioners to consider when working with faith-based leaders and communities to achieve shared goals.<sup>68</sup>

### Conclusions

A deeper goal should motivate Christians to act individually and collectively—the desire to function in ways that manifest the dignity of human persons who intentionally give glory to God by serving their neighbors and caring for God's creation. Aware of the perils to which small island nations are subjected by human-forced climate change, Christians should be responding to the prevailing injustices at all levels of decision making.

Drawing upon their Christian faith, each person, each family, each parish, and each diocese can help correct the injustices by examining their use of fossil fuels, identifying ways to minimize them, acting accordingly, and advocating action in the public square. Priests and bishops have a special role to play through homilies that explore

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[www.usccb.org/issues-and-action/human-life-and-dignity/environment/letter-to-congress-on-green-climate-fund-and-greenhouse-gas-emissions-2015-10-28.cfm](http://www.usccb.org/issues-and-action/human-life-and-dignity/environment/letter-to-congress-on-green-climate-fund-and-greenhouse-gas-emissions-2015-10-28.cfm).

<sup>67</sup> One example is *Healing Earth*, the interactive, online environmental textbook commissioned by the Higher Education Secretariat of the Society of Jesus in 2012 and published in January 2016 (<http://healingearth.ijep.net/>).

<sup>68</sup> Jame Schaefer and Susan Higgins, "Best Practices Survey—Promising First Step toward Developing Guidelines," [https://conbio.org/images/content\\_news\\_blog/RCB+BestPracticesSummary\\_12.pdf](https://conbio.org/images/content_news_blog/RCB+BestPracticesSummary_12.pdf); also Jame Schaefer, "New Hope for the Oceans: Engaging Faith-Based Communities in Marine Conservation," *Frontiers in Marine Science* 4, no. 62 (2017): 1–5.

the Christian theological tradition and apply its meaning to the plight of poor and vulnerable people who are most adversely affected. Bishops have another essential role—assuring the education of priests and deacons so they are well-equipped to address from the Christian faith perspective the perils that scientists have identified and islanders are experiencing.

