

ANALYSIS

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Strengthening partnerships for the Sustainable Development Goals: engaging faith-based organizations and scientists in youth climate change learning and action

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Abstract

Collaborations with and among faith-based organizations (FBOs), natural scientists, development organizations, and youth offer untapped potential for achieving the United Nations Sustainable Development Goals (SDGs). FBOs are important cultural partners for achieving the SDGs globally in numbers of adherents (80% of humanity) and resources, owning 8% of habitable land, half the world's schools, and many health and community development services; they provide assets for formal and informal education, forming youth leaders, and social justice action. Natural scientists are also critical to SDG achievement because the environmental components in many goals require specialized skills and background. We focus on Climate Action (SDG 13) as it links to other SDGs and because climate justice directly connects to human development - a major area of FBO work, and engages scientist outreach and youth action. We surveyed The *UN Environmental Program (UNEP) Faith for Action* and other major FBO networking initiatives that were formed to address the SDGs as well as literature covering other interfaces and partnerships between religion, sustainability, youth, SDGs, science, climate change, and education. We examined curriculum and guidebooks to identify best practices and identified gaps in partnership development. The Faith Pavilion and multifaith statements at COP28 and the international Catholic movements emerging from the SDGs-concurrent 2015 *Laudato Si'* encyclical and its follow-up 2023 *Laudate Deum* are exemplary in mobilizing educators, institutions, and organizations to integrate SDGs into activities through a faith and particular mission lens. International development FBOs and diverse religious groups worldwide support climate adaptation and mitigation by connecting their central mission to environmental care. Today's youth are unprecedented in number, sense of urgency, experience of climate anxiety and grief, and engaged sustainability actions. Yet, youth, FBOs and scientists are often not included in SDGs work. We recommend developing partnership skills, cultural and religious literacy materials, programs, and toolkits for secular groups and scientists partnering with FBOs, and networking opportunities to form partnerships. Connecting FBOs, including youth organizations, to larger youth climate movements and other collaborative climate networks, and creating climate action materials connecting to faith backgrounds of particular youth, will better equip potential partners for achieving the SDGs.

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Keywords Faith-based organizations, Sustainable development goals, Youth, Partnership, Education, Climate change, Activism, *Laudato Si'*, Religion, Science

Science highlights (for science partnerships or education)

- Scientists can connect to FBOs through partnering on science-based SDG targets, education programs and curricula development
- INGOs can increase SDG effectiveness through partnerships with scientists, FBOs and youth
- Research supports the importance of including youth and FBOs in climate action
- Research shows cultural literacy, common values, and collaboration networks are important for partnership success

Policy and practice recommendations

- Develop partnership skills by identifying shared values and using shared vocabulary
- Develop cultural and religious literacy, by designing materials, programs and toolkits for secular groups and scientists working with FBOs
- Increase networking opportunities for forming partnerships with FBOs
- Develop materials from youth's own faith background about climate action
- Connect FBOs, including youth organizations, to larger youth climate movements

Introduction

In 2023, we are more than halfway through the 2015-2030 United Nations (UN) Sustainable Development Goals (SDGs) period, goals which have integrated the environment into the previous Millennium Development Goals (human development) frameworks. The seventeen SDGs describe a world of flourishing humanity and a healthy environment [1] and their achievement requires new partnerships and practices (as expressed in SDG 17 - Partnership for the Goals). Increased connectivity, rapidity of information and news exchange, and broader awareness of multicultural diversity combined with improved data-gathering, make building partnerships easier from local to global scales.

The global COVID-19 pandemic, conflict in several world regions, and rapidly worsening climate change, have eroded some of the gains made in recent years to pull people out of poverty and promote an equitable world [2]. The existential threat of climate change,

failure of world leaders to respond, and isolation of the pandemic have increased mental health challenges of youth who increasingly suffer from anxiety and experience climate grief and despair [3]. Action is named as an antidote and young people are equipped to effect change, because of their skills in use of social media, rapid assimilation of information, passion, and energy [4].

Our (authors) interest in strengthening partnerships for the SDGs arose from our personal involvement with FBOs, academic backgrounds as ecologists, work with young adults in faith and academic settings, and faith-scientist partnerships [5]. We are scientists and faith community members who have each acted as liaisons between our scientific associations and people of faith who are interested in solving global and local problems. As educators, we experience the critical role of youth; as ecologists, we see the importance of connecting protection of ecosystems with human development. As faith community members, we see the power of religion in motivating, mobilizing, and organizing to accomplish not just traditional humanitarian aid, but the integrated health of land and people. Partnerships between all these groups are essential to achieve the SDGs, yet some partnerships have been overlooked.

A 2020 *SDG Partnership Guidebook* by UNDESA ([6] pg 66) describes four necessary competencies for partnership (a partnership mindset, human relationship skills, understanding of other sectors, and technical partnering knowledge) but the guidebook's focus is limited primarily to the partnerships between government, development organizations and business. While faith communities and youth involve the majority of humans, the guidebook only sparingly mentions these groups. Although natural scientists are key partners to achieving environmental SDGs, the guidebook only acknowledges a general role of academia.

Bridging these gaps in partnerships with FBOs for the SDGs is critical. This was directly addressed in events leading up to and during the recent global UN World Climate Conference, the 28th Conference of the Parties (COP)28 held in Dubai, United Arab Emirates (UAE) from November 30 - December 13, 2023. The importance of religious, spiritual, and Indigenous traditions in solving global crises was highlighted by the first ever Faith Pavilion, a gathering place during COP28 hosting 65 sessions arranged by over 70 organizations [7]. In November of 2023, the Muslim Council of Elders

hosted a Global Faith Leadership Summit in Abu Dhabi, UAE in collaboration with the COP28 Presidency, the United Nations Environment Programme (UNEP), and other global partners [8]. The Global Faith Leadership Summit focus and the activities of the Faith Pavilion during COP28 illustrate how timely it is to promote partnerships with FBOs to achieve the SDGs.

We investigate the gaps and identify practices required to catalyze the social transformations necessary to achieve the SDGs. In particular, we explore connections needed among people working on global development, scientists, and youth climate organizations with faith-based organizations (FBOs) and local faith actors (LFAs) in education, research and broader societal action on the environment. We also examine how religious literacy, the inclusion of FBOs and youth in decision-making, and further development of partnership competencies contribute to achieving the SDGs.

Methods

We conducted a literature search for papers written in English covering interfaces and partnerships between religion, sustainability, youth, SDGs, science, climate change, and education, primarily since 2015, but including foundational work prior to the SDGs. We focused particularly on partnerships between pairs of groups, each with FBOs: scientists, traditional international development non-governmental organizations (INGOs), and youth as well as interfaith partnerships. We then also surveyed resources of these groups and any initiatives from UN agencies and elsewhere for guides to best practices in partnerships. We looked at Forbes list of America's top charities [9], the fifty largest relief and development Christian organizations [10], the 13 largest humanitarian non-governmental organizations (NGOs) worldwide [11], and similar lists to identify partnerships that included FBOs to achieve SDGs. We also reviewed relevant networks and groups such as those active in the Alliance of Religions in Conservation (ARC) [12], member groups of the Youth Climate Action Network [13], and projects of Faith for Earth [14].

We specifically looked at curricula on the SDGs and climate change, and identified those with a faith basis. While our search was not quantitative, and we focus more on discussing Christian examples and those with a US partner, throughout this paper, we reference the key collections listing examples of global partnerships and partnerships involving FBOs across the wide range of religions, such as those reviewed by Hitzhusen and Tucker [15] and those described in the UNEP database, which is archived by the Yale Forum on Religion and Ecology (FORE) [16].

Overview of partnership potential for the sustainable development goals of faith-based organizations with scientists and youth

Religious organizations as key assets for sustainable development Goals

The UN has identified collaboration with FBOs and LFAs - including individual leaders and organizations - as particularly critical to success in achieving the SDGs because they are so important to societies and have long provided social structure for development needs [17]. Globally, as of 2022, the largest religions are Christianity (2.4 billion followers), Islam (1.9 billion), Hinduism (1.2 billion), Buddhism (half a billion), followed by Shinto, Judaism, Sikhism, and Taoism [18]. Even though religious affiliation has declined in the global north, more than 75% of US adults identify as religiously-affiliated [19]. FBOs have facilities and assets for education and partnerships as globally, there are over 41 million churches, mosques, temples and other gathering spaces. Additionally, FBOs own 8% of the habitable land surface, 5% of all commercial forests, 50% of global schools (64% of schools in Sub-Saharan Africa), 10% of financial institutions, and 14% of community development corporations ([14] pg 7). FBOs are experienced in collaborating to serve disadvantaged and vulnerable communities (including racial-ethnic minorities and low-income groups), leaving them poised to respond to climate impacts. During COVID-19, FBOs provided physical infrastructure, complex social networks and access to support systems and food, health-care, and education resources [20].

Religions and environmental care

Increasingly, scholars and practitioners from different faiths have investigated their own traditions and connected their beliefs to caring for the rest of the natural world. Most faiths have central beliefs that are consistent with care of nature, alleviation of poverty, and promoting peace, all congruent with the SDGs. Many international, national and regional organizations address current environmental crises through a lens of faith. The Yale FORE houses an extensive compilation of the views of religions on the environment and faith-environment initiatives and organizations [21].

In addition to efforts within their own faith communities, religious members have built extensive ecumenical and interfaith partnerships and action initiatives around common values. In the U.S., the National Religious Partnership for the Environment (NRPE) formed an alliance in 1993 of four independent religious groups that were organized nationally: the Coalition on Environment and Jewish Life, the Evangelical Environmental Network, the National Council of Churches, and the U.S. Catholic

Conference of Bishops [22]. This partnership promoted much of the coordination between faith communities, scientists, and environmental groups that has occurred since.

Hitzhusen and Tucker [15] reviewed important national and international collaborations of religions around earth stewardship, many of which set the stage for action toward the SDGs. For example, over nearly three decades, ARC gathered religious leaders and helped them develop environmental programs rooted in their own core teachings, traditions, beliefs and practices [23]. This led to the *Ohito Declaration on Religion, Land and Conservation* in 1995 [24] and eventually helped launch 26 long-term regional environmental plans [25]. The UNEP drew on this background and other such projects in the *Faith for Earth* program begun in 2017 [14].

Statements by religious leaders support climate action

A number of additional major religious declarations were produced prior to the 2015 COP21 meetings in Paris, France, at the start of the SDGs [26]. These included Catholic Pope Francis releasing the major encyclical *Laudato Si': On Care of our Common Home* [27] and unprecedented international religious leader statements with numerous signatories by each of the major world religions of Islam, Hinduism, Buddhism, Judaism, Sikhism, and Bahá'í. All these statements called global leaders to action on the crisis of climate change [26]. Religious leaders and organizations were active before and during the 2015 COP 21 meetings [28], helping achieve the historic agreement.

Faith based organizations engagement in SDGs

Since 2015, international partnerships with FBOs have continued. The International Partnership on Religion and Sustainable Development (IPaRD) brings together religious and other civil society organizations with government and international agencies, to draw on the positive impacts of religious and cultural values in sustainable development [29]. The Joint Learning Initiative for Faith and Local Communities (JLI-FLC) provides research to increase the effectiveness of such collaborations by studying the roles and contributions of LFAs in humanitarian and development action in communities [30]. This evidence helps determine which policies and actions are locally effective, rather than relying on perspectives of Western and Northern agents.

Collaborations with FBOs have benefited the most vulnerable in many places around the globe. For example in the Pacific Island Nations, the Australian government collaborates with indigenous peoples and churches through the Pacific Church Partnerships Program (PCPP) [31], while the Pacific Islands Climate Action

Network partnered with a multifaith FBO, Green Faith, to promote climate action in faith communities in the weeks leading up to the 2021 international climate meeting, COP26 [32]. In the Amazon Basin, the Interfaith Rainforest Initiative is a partnership of FBOs and UNEP to protect rainforests and their indigenous guardians, who are in danger of losing their lands and lives [33].

Role of scientists in SDGs and partnerships

The engagement of natural and social scientists with FBOs and other partners is necessary for the achievement of the SDGs, particularly SDG 13 - Climate Action. Partnerships that include scientists and faith communities have been featured in past recommendations for care of the environment or "earth stewardship." Hitzhusen and Tucker [15] described many of the previous efforts to connect scientists and FBOs in environmental work.

Critical roles of natural scientists include assessing climate change impacts and options for curbing global warming, designing efficient green energy sources, innovating solutions for carbon capture, and evaluating risks and benefits of geoengineering options. Social scientists are needed to evaluate climate policies, track commitments made by governments and businesses, develop climate finance, calculate the role of climate change in disasters, prepare for disasters, and plan resilience pathways [34]. Scientists are important in development and assessment of science-based targets to measure the success of the SDG-13 Climate Action. Collaborations of scientists with FBOs to promote better use of FBO resources and mobilization of members is central to the Science-Based Targets for Faith project of World Resources Institute and Georgetown University [35].

Scientists have often been quiet or hidden partners with faith leaders and FBOs in their learning, statement development and action. For example, the Pontifical Academy of Sciences and the Pontifical Academy of Social Sciences [36, 37], both composed of top scientists/scholars regardless of religious affiliation, and many other scientists of goodwill were consulted in the writing of *Laudato Si'*. Scientists who are naturally bridge-builders with expertise and interest in both faith and climate application are critical allies for the years ahead [5].

Engaging youth partnerships for the SDGs

Youth of today and the future are key leaders to culture-changing. They are the largest youth generation in history, numbering 1.8 billion between ages of 10-24 and growing, with 1.9 billion young people projected to turn 15 between 2015 to 2030 [38]. Ninety percent of youth live in developing countries, more than half in Asia and the Pacific region [39]. The UN Secretary-General's Envoy on Youth is a global advocate for youth leadership

development and action in the SDGs and since 2016 has biannually named a cohort of 17 Young Leaders for the SDGs to represent global youth leadership [40]. Some studies on SDG progress have highlighted youth roles in direct actions to meet SDG targets and as important conduits of information and persuasive communicators with their parents and other community members. Youth innovation and energy are valuable for achieving the SDGs and they need to be included in decision-making and given safe civic spaces [38].

Much of the recent explosion in youth climate activism came in the wake of the release of *Global Warming of 1.5°C. An IPCC Special Report* in 2018 [41]. Youth activist Greta Thunberg's actions sparked the Fridays for Future movement of youth-led school walkouts, climate strikes and protests [42]. Youth climate activism promotes several positive results, such as increasing their hopefulness and connection and focusing international attention away from symptoms and onto the root causes of climate change [43]. Promoting youth climate activism through collaboration with FBOs has the benefit that it allows young people to integrate their values with their actions. One example has been the climate activism of Indigenous youth, which has given them greater visibility and voice [44].

***Laudato Si'* - a model of integrated SDGs engagement**

Roman Catholicism presents a good example of a coordinated effort to connect faith and the SDG in the 2015 encyclical, *Laudato Si' (LS)* by connecting religiously meaningful language with the aspirations of human development and sustainability [27]. The extensive document calls for all people of faith and good will globally, in all societal roles, to work together to dialogue and create a just society in which "integral ecology" merges care of the earth and its systems with human development. LS emphasizes the need for an "ecological conversion" - changes in each of us - that promotes socio-economic systems and behavioral shifts that ensure a just, sustainable future for all. In response to LS, international major Catholic movements have emerged that are mobilizing educators, youth and organizations to address climate change, pollution, biodiversity loss, and to further care for humanity. Because Catholic teaching derives from a centralized place (Papal See), and Catholicism is already one of the largest global actors in humanitarian work, health care and education, LS-related actions are the strongest and most coordinated faith-based sustainable development activities of any religious group [45].

Laudato Si''s inspiration was echoed by many scientific and other organizations issuing affirming statements in 2015, yet the aspirational overview document lacked concrete steps. To put the encyclical into practical action

towards the 2030 SDGs target of carbon reduction, the *Laudato Si'* Action Platform (LSAP) [46] was launched by the Vatican in 2021. LSAP has seven goal areas that envision the SDGs target through the lens of *Laudato Si'*, such as Response to the Cry of the Earth and Cry of the Poor, and Ecological Education, that interface well with developing science, youth and humanitarian partnerships. LSAP includes inspiration, international networking opportunities and assessments towards making impacts on 2030 carbon reduction targets by seven major sectors (including universities, schools, health care) that encompass the spheres of influence of the Catholic church. Since Catholics are 17.7 % of the global population [47], Pope Francis envisions Catholic engagement in LSAP as a movement with great potential for lasting global change. The LSAP initiative is partnering with other global actors including energy and science content experts to provide education and technical resources for improving carbon tracking (author LM Jablonski, December 2023).

Concurrent to LSAP, all levels of Catholic educational institutions were also invited to embrace the seven commitments of the Global Compact on Education (GCE) [48]. The GCE advocates for partnerships beyond one's own institutions and includes environmental care, economics and response to the vulnerable and disadvantaged also found in LSAP. GCE adds additional SDG aspects including human dignity and finding new ways of understanding the economy, politics, growth and progress; promoting the full participation of girls and young women in education, and listening to the voices of children, teenagers, and the young. The Marianist Family Encounters Project [49] is one religious network approach that integrates the LSAP, GCE and Marianist values and characteristics of education. Many other Catholic movements are similarly integrating SDG-related concerns through LSAP and GCE and the spirit, identity and traditional mission dimensions of their institutions.

Pope Francis released *Laudate Deum, an Apostolic Exhortation* in October 2023 just in advance of COP28 meetings [50] and wrote an address delivered at COP28 [51] that has elements of inspiration, challenge and policy statements. In both COP28 documents, Pope Francis highlights the need to act and advocate from individual to national and global policy levels because of the climate crisis impacts on younger generations and the economically poor. The document summarizes past COP meeting advances and failures, climate justice, overconsumption by the US, connections between climate and conflict, and emphasizes care for future generations. Pope Francis also signed a joint multi faith statement that came out of the Global Faith Leaders Summit prior to COP28 [8, 52]

The examples of *Laudato Si'*, *Laudate Deum* and related Roman Catholic endeavors within Catholic churches

and in ecumenical and interfaith partnerships is one of the most integrated and widespread of faith community movements supporting the SDGs. It involves partnerships with youth, scientists, other faith traditions, and secular development agencies as well as actions within Catholic institutions themselves.

Other examples of faith-based action on climate change

While this paper cannot cover them, members of many other religious traditions (as seen in the initiatives of groups connected through the COP28 Faith Pavilion [7] and other collaborations) advocate and act on climate change through their own institutions even when they do not operate on such a large scale. Both American and Israeli Jews for example, express profound concern about climate change. Jewish community organizations in the Jewish Climate Leadership Coalition, lead their members to climate action and advocacy [53]. EcoSikh, working in India, helps plan environmentally sound pilgrimages while Green Muslims connects local volunteers to climate projects [54].

Sometimes an FBO resists a popular narrative about environmental concern. For example, reports by the National Association of Evangelicals (U.S.) on the impact of climate change on poverty (2011 and 2022) [55, 56] were surprising because US evangelical protestants have had lower rates of climate change recognition than other religious groups [57]. However, global evangelical Christians hold very different views than their American peers. The World Evangelical Alliance (WEA) was one of the collaborators in planning the Faith Pavilion at COP28, as 77% of members of this diverse subset of Christianity live in the global south [58, 59]. Clearly, there is much potential for future building of partnerships with a wide range of FBOs, youth, scientists and development agencies.

Benefits and challenges in forming partnerships with faith-based organizations for the SDGs

Our overview shows that there is much potential for future building of partnerships with FBOs, youth, scientists and development agencies. The SDGs provide a valuable meeting place for people from diverse cultures, religious traditions and fields cooperating across differences for common goals, providing a number of benefits to each of the partners and offering some challenges.

Benefits of FBO partnerships

The United Nations Development Programme (UNDP) identified at least six benefits to international development agencies collaborating with FBOs, including to “expand coverage of interventions, increase cost efficiency, amplify advocacy and communication, catalyze learning, develop trust and tolerance, and facilitate

cross sector engagement” ([60] pg 6). Religions can offer hope, moral reasoning, and an organizing structure. Mariani, et al [61] assess the value of collaboration across public and private, for profit and non-profit organizations to drive innovation, a critical need in sustainable development.

For FBOs, the SDG Framework describes the actions of charity and hospitality that FBOs already do in terms used in international development. Applying these terms can help access a wider array of funding and collaboration opportunities. Collaborating across diverse backgrounds can also help people with resources manage them better and can give voice to marginalized groups. One example is the Nones and Nuns Land Justice Project where religiously unaffiliated youth, some from marginalized backgrounds, joined with Catholic nuns. Together they better cared for the land, experienced spiritual togetherness and increased justice [62].

Because climate change drives poverty, combating climate change is a necessary part of poverty reduction, a common humanitarian value. Most estimates suggest that 32 -132 million additional people will be pushed into poverty by 2030 [63]. Many traditional relief and development FBOs such as World Vision International (WVI) are already active in climate change work and already represent the types of partnerships needed. WVI is one of the world’s largest humanitarian INGO. Their broad collaboration of global partners vary from local to national governments, international agencies and foundations, to other NGO, academia, and the private sector. Since the 1970s, they have promoted sustainable agriculture, clean water initiatives, education and job opportunities in efforts similar to today’s sustainable development work. Such partnerships have promoted the localization of action, giving power to a local workforce and stakeholders [64].

Challenges to developing FBO partnerships

Collaboration with FBOs on climate mitigation faces more difficulty than such collaboration on direct humanitarian efforts and climate adaptation because of the complexity of climate change effects and political, religious and other differences that play roles in how people consider solutions. To achieve SDG 13 Climate Action, faith communities need to form a religious understanding based on foundational beliefs, which most have already begun. Then they must connect their work of humanitarian assistance to the impacts of climate change. Eventually they must address the fundamental roots and problems that drive climate change and find just solutions, a difficult task.

Sometimes secular institutions face the challenge of simply identifying FBOs as potential partners. The

Consultative Group for International Agricultural Research (CGIAR), a network of scientific organizations operating in 89 countries and partnering with over 3,000 governments, businesses, agencies and nonprofit organizations, recently released an overview of their partnership strategy. They identified partnerships as critical to their work to achieve the SDGs. However, neither their strategy document nor an evaluation of how effective their partnerships have been mentioned anything about faith communities or specific approaches to culture [65, 66].

Even when partnership with FBOs is desired, secular groups often lack necessary trust, religious literacy, coordinated efforts to include FBOs in sustainable development, an evaluation of partnership efficacy, and a particular finesse needed given the diversity of faith communities [67]. FBOs may lack partnership necessities: funds, training or certifications, staff or facilities, inclusion in decision-making, connection to global actors, or a familiarity with processes and vocabulary of INGOs. FBOs may also face disagreement within their own communities or with some aims of partner organizations, a problem that jeopardizes working with partners on goals even where there is agreement [60, 68].

A 2016 report by the United Nations Population Fund (UNFPA) suggested several solutions to difficulties between development agencies and FBOs, including: expanding the range of FBO participants, developing religious and human development literacy on both parts, requiring accountability between groups for achieving goals, communicating the SDGs to collaborators who may not use that framework language, and better using social media and youth knowledge [69].

Summary of key findings

Our extensive review identified many partnerships and initiatives involving FBOs that have potential for achieving the SDGs as well as gaps between partners and in skills and processes for building partnerships that should be strengthened. The most common partnerships we have seen are between FBOs, LFAs and international relief and development agencies for addressing poverty and environmental care, as World Vision International illustrates. The Faith for Earth campaign of UNEP also illustrates international environmental and development agencies partnering with religious groups. Interfaith partnerships to solve environmental problems, especially climate change, are also common; Interfaith Power and Light, GreenFaith, and the Interfaith Rainforest Initiative are three [33, 70, 71].

The outstanding work of the Interfaith Coordination Group on Climate Change for COP28 [72] that included the multifaith statement on climate action and

the Faith Pavilion programs [7, 8] shows the progress of global FBOs in engaging with other leaders on the SDGs, increase visibility for environmental advocacy work by FBOs and promote multifaith understanding. This mission and the expressed emphasis on inspiring new ideas for partnerships at the interface of faith, science, humanitarianism to address climate change supports our claims.

The Roman Catholic Pontifical Academies of Sciences and Social sciences are good examples of religious bodies partnering with scientists; likewise, scientists reach out to faith communities through a number of projects of professional societies. Members of the Ecological Society of America (ESA) developed a toolkit to map ecosystem services they study to the SDGs [73] and address the connection of science and faith communities through their Environmental Justice section and community partnership initiatives [74]. The American Association for the Advancement of Science (AAAS) Dialog on Science, Ethics, and Religion (DoSER) programs and resources connect faith leaders and scientists to communicate science and better understand the values and vocabulary of faith communities [75]. The Society for Conservation Biology has a Religion and Conservation Biology Working Group and has proposed best practices for scientists in *Guidelines for Interacting with Faith-Based Leaders and Communities* and these practices have been field tested [76, 77].

Finally, there are hundreds of independent, self-organized youth-led and youth-focused NGOs groups, organizations and individuals under the broad umbrella of the international youth climate movement network recognized by the UN (YOUNGO) [78]. YOUNGO has been identifying youth gaps in UN climate work, and amplifying expressed youth interests in climate adaptation, action, equity, and justice [79]. It proved impossible to find a list of all the NGOs networking through YOUNGO. However, we looked at the member groups of regional networks and many in the North American Power Shift Network of youth-led social and environmental justice associations [80, 81]. Looking at the names of the organizations connected to these large youth climate networks reveals few if any that are explicitly faith-based however. The group Action for the Climate Emergency (ACE), which has educated 25 million high school students through their climate curriculum, lists 50 partners, only one of which, Young Evangelicals for Climate Action, is obviously related to a faith tradition [82, 83]. However, one exemplary youth curriculum that integrates faith and climate action is the Catholic *Wholemakers* curriculum developed by youth and young adults for their peers. Recognizing that youth needed a unique approach from older adults, the 10-part series was developed for church-based

youth ministry, schools, colleges and others. It integrates three themes most attractive to this generation: Spirituality & Ecology, Sustainability & Simple Living, and Social Action & Civic Love [84].

Recommended actions to advance FBO partnerships for the SDGs

We synthesized our own investigation into what partnerships already exist, solutions to the problems identified by others above, and recommendations such as those of the UNFPA in order to suggest necessary changes to produce stronger partnerships with FBOs to achieve the SDGs, particularly SDG 13 - Climate Action. Our recommendations include improving the collaborative skills of partners, increasing cultural literacy, developing more networks for partnerships to form, more strongly inviting FBOs into climate action spaces, and developing faith-based curricula for youth.

All collaborators need the skills for forming & building partnerships

Collaboration requires skills, such as listening, discovering shared values and understanding differences, determining what we can do together, and willingness to learn from others and work on common goals. For example, joint inquiry, empathy, equity, and integrity are common collaborative values found to be successful for science-community partnerships [85]. FBOs need to work across religious differences - both between religions (interfaith) and inter-denominationally within their own tradition. Partnership success may also require specialized skills in grant-writing, business management, writing agreements and other functions that may be difficult for very small FBOs lacking infrastructure, experience, and staffing. Recognizing those needs and supporting those functions in all partners is part of good collaboration.

Collaborators need cultural literacy

In addition to skills, SDG partners need to know the vocabulary and networks to connect on climate actions. Several studies have highlighted a lack of religious literacy among INGOs, governments, and academics working with FBOs, showcasing the need for understanding of local faith practices and religious cultures [15, 60]. There are locally accepted vocabularies, faith beliefs, social concepts, taboos, and practices with which outsiders may not be familiar. Likewise, there are specific vocabularies, policies, and operating mechanisms of international sustainable development work in which FBO leadership may not be trained.

Collaborators need networking spaces and mechanisms to find each other

Social networks often differ between potential partners. Scientists may not interact between disciplines, across world regions, or with non-scientists and many scientists do not partner with development agencies or FBOs. Given publication pressures and teaching loads in the academy, collaboration among different fields of natural scientists, social scientists, and humanities can be daunting.

There are a number of solutions already developed to solve these problems as the ESA, Society of Conservation Biology, and AAAS DoSER projects illustrate. Some academic organizations have expert speakers lists, and global community science platforms (also called "citizen science") that link ordinary people to large research projects [86]. Another solution has been the rise of interdisciplinary research and journals [87]. The Union of Concerned Scientists has developed an excellent toolkit with videos for promoting successful scientist and community partnerships that include indigenous voices and apply more broadly to other FBOs [88].

Overall, the emerging trends of more inter- and trans-disciplinary work, new fields of study such as Sustainability and Human Rights, the transformation of the University's role to be of greater service with the local community and common good of society will all assist engagement and partnerships. Making partnership development for the SDGs a funding priority is essential at all levels.

FBOs of all types should be welcomed into spaces where SDG 13, Climate Action, is addressed

A history of colonialism and white supremacy has left development work top-heavy with Western funders and leadership and lacking a voice from local experts in many situations [89]. While our examples were primarily Christian organizations, FBOs of all religions need to be involved in achieving the SDGs, particularly those of indigenous groups holding Traditional Ecological Knowledge (TEK), who may have their own principles about how to partner with international and national funders [90]. Many development groups emphasize localization, the process of establishing local leadership for joint projects, as the International Federation of Red Cross and Red Crescent Societies (IFRC) does. Environmental groups such as World Wide Fund for Nature (WWF) and the Nature Conservancy have come to understand the importance of indigenous and local partners in both climate action and conservation as well [91, 92].

One particularly promising place of connection is SDGs action in cities, which are important in global

development because the majority of the world's population live in urban areas. Furthermore, cities are large enough to enact significant programs yet small enough to be agile. The World Resources Institute (WRI) identifies seven ways FBOs can make cities more equitable and sustainable. Because FBOs are already providing grass-roots support for social needs in cities, their volunteers, expertise, community relationships, and infrastructure can be used to support the SDGs [93].

The strength of faith community voices at COP28 in Dubai, United Arab Emirates [7, 8] shows that international climate stakeholders recognize the importance of religion in achieving the SDGs; we now have to do so. We still have a ways to go. The Connect 4 Climate initiative of the World Bank Group, for example, includes a Knowledge Partnership Program to link individuals or organizations to over 500 other possible partnership organizations. None of these display a religious affiliation in their names or short descriptions [94]. Although that does not preclude some of the organizations from being FBOs, the lack is in contrast to the obviousness of FBOs in humanitarian work.

Faith-based youth climate organizations need to join with the mainstream youth climate movement. *The State of Religion and Young People 2020* describes the spirituality, distrust of organized institutions, loneliness, and longing for connection experienced by youth in Gen Z, especially since the global Covid-19 pandemic [95]. Climate action movements offer relationships, meaning, and identity building. Supporting the connection of faith community youth to the broader youth climate movement is one way to holistically meet the needs of youth and promote SDG 13 - Climate Action.

Youth need climate curricula that connect to their roots and generational culture

In one study, researchers concluded that students were overwhelmed by the difficulties of world problems, feelings of inadequacy, and stress and that they needed help connecting their own lives to actions they could do [96]. Consequently, we need to design climate action curricula in collaborations between educational FBOs, academic experts, and youth themselves that address the SDGs, faith, and direct actions students can take to solve climate change [44, 45], much as the *Wholemakers* curriculum, already described, does. Because of their knowledge and specialized skills, scientists have a natural way to contribute to this endeavor. Science educators and the newer generations of scientists - who are young adults themselves - bridge the generations and are key players.

Higher educational institutions, whether faith-based or not, can support youth with campus-wide sustainability efforts, Sustainability Offices, Climate Action Plans,

internships, and class projects addressing local needs. The Association for the Advancement of Sustainability in Higher Education (AASHE) International also offers resources to monitor, improve, and educate about sustainability and a rating system to track their activities to the challenges of the SDGs [97].

Conclusion

SDGs are already being implemented in partnership and the movement of broadening partnerships to include scientists, FBOs, and youth show potential for greater impact. We examined some key partnerships and partnership needs among people working on global development, scientists, and youth climate organizations with faith-based organizations (FBOs) and local faith actors (LFAs) to achieve the SDGs, particularly SDG 13 - Climate Action. We identified some strengths and weaknesses of current collaborations and made recommendations for promoting education, research and broader societal action on the environment through stronger partnerships. We conclude that religious literacy, the inclusion of FBOs and youth in decision-making, and further development of partnership competencies and opportunities are all required to achieve the SDGs. Sharing common values and reducing participation barriers will support the building of strong partnerships from city to nation and internationally to better address the urgent crisis of climate change together. The tagline of the COP28 Faith Pavilion - "Exploring faith, science, climate and humanitarianism: Providing a platform for new ideas for partnerships" [98] - is our inspirational call for this decade.

Abbreviations

AAAS	American Association for the Advancement of Science
AASHE	Association for the Advancement of Sustainability in Higher Education
ACE	Action for the Climate Emergency
ARC	Alliance of Religions and Conservation
CGIAR	Consultative Group for International Agricultural Research
COP UN World	Climate Conference, Conference of the Parties
DoSER	Dialog on Science, Ethics, and Religion
ESA	Ecological Society of America
FBO	Faith-Based Organization(s)
FORE (Yale)	Forum on Religion and Ecology
GCE	Global Compact on Education
IFRC	International Federation of Red Cross and Red Crescent Societies
INGO	International Non-Governmental Organization(s)
IPaRD	International Partnership on Religion and Sustainable Development
JLI -FLC	Joint Learning Initiative on Faith and Local Communities
LFA	Local Faith Actor(s)
LS	<i>Laudato Si'</i>
LSAP	<i>Laudato Si'</i> Action Platform
NGO	Non-Governmental Organization(s)
NRPE	National Religious Partnership for the Environment
SDG	Sustainable Development Goal(s)
UAE	United Arab Emirates

UN	United Nations
UNDESA	United Nations Department of Economic and Social Affairs
UNDP	United Nations Development Programme
UNEP	United Nations Environmental Programme
UN IATF-FBOs	The United Nations Inter-Agency Task Force on Engaging Faith-Based Actors for Sustainable Development / Religion and Development
UNFPA	United Nations Population Fund
WEA	World Evangelical Alliance
WWF	World Wildlife Fund (World Wide Fund for Nature outside of North America)
WVI	World Vision International
YOUNGO	Youth NGOs accredited to the United Nations Framework Convention on Climate Change

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Authors' contributions

Author contributions were approximately equal. DFB: researched, lead writer and edited. LMJ: researched, writer and edited.

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