



FAITH FOR EARTH

A photograph of a forest with sunlight streaming through the trees, creating a warm and peaceful atmosphere. The sun is low in the sky, casting long shadows and creating a golden glow. The trees are tall and thin, and the ground is covered in moss and fallen leaves.

Guidelines on Green Houses of Worship

Introduction

The building sector alone is responsible for 40% of the annual energy consumption and nearly 30% of all energy-related greenhouse gas (GHG) emission¹. Buildings in general do not only consume energy, but also water, produce wastewater and solid waste as well as one of the main reasons for mining sand, quarries and other extractives.

The concept of green buildings is as old as the first building was constructed. Traditionally, home owners wanted to have the best aeration system for their dwellings, the best natural light and a small plot of land to grow their own food needs. In recent history, due to the negative impact of urbanization on the environment, the concept of green buildings has been developed to encourage home owners to integrate some design elements to minimize the impact on the environment and use construction

materials, fixtures and other resources that reduce negative impacts and create positive ones on our climate and natural environment.

A House of Worship is a building or a structure especially constructed or converted into a place where individuals or a group of people perform religious rituals of devotion. Such houses of worship can occupy a land as small as few meters to structure and facilities that expand for thousands of acres. Temples, monasteries, churches, synagogues and mosques are examples of such structures. Throughout history, these houses of worship were among the first buildings to be constructed in a human settlement.

There have been some attempts to count how many houses of worship for each of the religions currently exist, but no credible study could give precise numbers. Some resources indicate that there are around 37 million churches, 4 million mosques, 20 thousand synagogues and hundreds of millions of temples². But, with no doubt

they are in the dozens of millions. These houses of worship can become minarets of sustainability and examples of how religious beliefs demonstrate the concept of stewardship and human responsibility towards the environment, in the same symbol of the religion, i.e. the house of worship.



Image by [Dimitris Vetsikas](#) from [Pixybay](#)

It is for this reason; this publication has been developed to showcase some successful examples from religions around the world on their greening efforts of their houses of worship and provide some useful references and tips to build or transform a

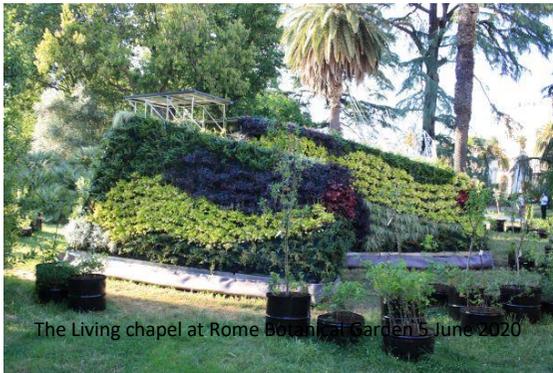
¹ UNEP sustainable Building and Climate Initiative

² UNEP's Faith for Earth Foresight Brief 008.

house of worship to be green and contribute to achieving sustainability.

The Living Chapel and Living Sacred Spaces

Inspired by the United Nations 2030 Agenda for Sustainable Development and Pope Francis's landmark environmental encyclical, *Laudato Si'*, a global team of architects, artists and musicians have created a Living Chapel as a place of serene harmony between nature, humanity, and God. The Living Chapel was launched on the world Environment Day on 5th June 2020 at the Rome Botanical Garden³.



The mission is to unite all faiths around the value of care for our common home by inspiring, educating, and equipping all people to live and act in harmony with the natural world. The Living Chapel was made a reality by joining many important partners such as the Dicastery For Integral Human Development of the Vatican, FAO, UNEP, and many others. The initiative was founded by Julian Darius Revie Founder and Creative Director.

The Faith for Earth Initiative is discussing with the partners, and others interested, the launch of the Living Sacred Spaces Initiative. The initiative will encourage Houses of Worship to integrate a holistic approach in greening its buildings and integrate the following elements:

- 1- Planting trees in the premises of the sacred space and by the sacred space in the community.
- 2- Become a nursery to distribute to locals with a hired plantation expert - generating income for locals— or enhancing the skills of the guardian of the sacred space.

- 3- Ensure energy efficiency of the buildings including solar supply of energy, to the sacred space and the neighboring community. Retrofitting to reduce energy loss in existing buildings.
- 4- Ensure water efficient space, with water recycling by using grey water for the trees and use water efficient faucets.
- 5- Establish organic farms within the premises of the living space as much as the space can handle, including roof top gardening and vertical gardening.
- 6- Solid waste management system in place, recycling and reuse of recyclable materials.
- 7- Encourage green preaches – On holidays, Sunday, Fridays, etc.
- 8- Promote green faith celebrations such as green Ramadan, Green Christmas, etc.
- 9- Provision of a space for interfaith activities/worship.

³ <https://livingchapel.com/>

What is Green House of Worship?

All faiths teach to revere and take good care of nature and the environment. Houses of worship, churches, mosques, synagogues, temples, etc., often serve as the spiritual centre for communities. When these focal sites preach about sustainability, believers will learn to become increasingly environmentally conscious in their daily lives. Therefore, the work done in and around the houses of worship will have great influence.



A mosque in Istanbul Copyright [Pixybay](#)

To build up green houses of worship is to have religious sites engage in eco-friendly practices of worship, sustainably design and construct buildings, and most impactfully, to act as a centre of sustainable lifestyles and teachings within communities. The engagement on green issues is a journey that unfolds gradually. What you can do depends on where you are starting from.



Ginkaku ji Temple copyright by [Pixybay](#)

Where to Start?



Rooftop of Annunciation Byzantine Catholic Church, photo from [its website](#)



- 1) Host a roundtable of all interested partners/ congregants/ worshippers to discuss about the need to implement sustainable practices, why it is important, and what it means to be a green house of worship. Form a “Green Committee” with dedicated members.⁴

⁴ ARC. 2015. [Green Temples Guide](#).

- 2) If possible, conduct an environmental **assessment** of the house of worship. This can give a better idea of what the house of worship is already doing positively and which significant environmental issues can be tackled later.
- 3) Discuss and communicate with other practitioners that have implemented similar programmes. Think of related organisations you can partner with and learn together.
- 4) Propose realistic measures and opt for better ecological practices in the house of worship. A **strategic plan** will vary on several factors including size, budget, number of worshippers, geographic location, etc.
- 5) Start a fund or trust to financing improving the sustainability of your house of worship.



Photo from [Temple Israel of Boston](#)

The Green Team of **Temple Israel of Boston** took in charge of reducing the carbon footprint, educating the congregation about environmental responsibility, and facilitating the communication with communities and professional agencies. It consists of a group of congregants, clergy and staff.

Umbrella organization/ Initiatives on Green Houses of Worship:

- [Eco-Temple Community Development Project](#) (Buddhism)
- [Green Churches Network – Canada](#) (Christianity)
- [Green the Church](#) (Christianity)

- [The Green Church Initiative](#) (Christianity)
- [Church of England – Shrinking the Footprint](#) (Anglican)
- [Eco-Church](#) (Christianity)
- [Eglise Verte](#) (Christianity)
- [Daoism Ecological Temple Network](#) (Daoism)
- [Green Ramadan Initiative](#) – ISNA (Islam)
- [Green Mosques Initiative](#) – Morocco (Islam)
- [Environmentally Friendly Mosque Initiative](#) – Environmental Green Horizons Society (Islam)
- [Green Mosques in Jordan](#) (Islam)
- [Indonesia Council of Ulema Green Mosque Initiative](#) (Islam)
- [Green Gurdawa](#) – Eco-Sikh (Sikhism)
- [Green Temples Guide](#) (Interreligious)
- [Interreligious Eco-Justice Network](#) (Interreligious)

See the sources and specific guides on established strategies and examples of religious practices and green buildings in the next two sections. However, there is no single applicable blueprint and we encourage people to be creative and work within their specific contexts.

Toolkits for Eco-friendly Religious Practices

Perhaps you are currently unable to “green” your religious facilities for various reasons. However, having sustainable lifestyles pervade in religious sites and communities is a milestone for greening the house of worship as well. There are many ways to raise awareness and offer tips to your members through religious practices. There are other ways the house of worship can become the focal point for environmental engagement of communities.

Green Worship

- 1) Include the importance of sustainable living in regular sermons or preaches. Disseminate statements, add prayers, take meditations, or sing hymns about caring for nature. Draw inspiration from religious texts.
- 2) Organise congregations and celebrations on environmental themes and on special days such as Earth Day, World Environment Day, World Car Free Day, *etc.* Organized activities can be cleaning up parks, car-free Sunday, tree-planting, spiritual outings, *etc.*
- 3) Make sure all your worship and gathering activities are low-noise, low-pollution, and low-emission. For instance, encourage people to walk or cycle to worship, save water during ablution, *etc.*
- 4) If you are considering constructing a novel house of worship, why not try a ‘spiritual forest church’ or alike? Get creative!



Photo from [Pixabay](#)

EcoMENA provides tips for a Green Ramadan to Muslims: reduce food waste, save water during making ‘Wudu’, reject disposable cutlery and so forth.

Pleasley Forest Church nestles within the ancient boundaries of Sherwood Forest, Mansfield. There is no building, for nature is the cathedral, the sky and stars its rafters, the grass its floor and the trees its pillars. People meet to have spiritual senses awakened by connecting with nature in the worship of the Creator.



Pleasley Forest Church, photo from [its website](#)

Longshan Temple reduces the use of incense and find more eco-friendly alternatives for traditional incense.

✚ Education & Awareness Raising

- 1) Prepare educational materials including signs, leaflets, posters and newsletters for devotees.
- 2) Establish and support programmes to train religious teachers, future religious leaders and general followers on sustainability.

- 3) Involve religious-affiliated schools with more environmental education in the curriculum.
- 4) Start a 'green group' in a house of worship which leads worship, carries out green actions, holds workshops on sustainable lifestyle, and perhaps even writes green articles for publications.



Photo from [Pixabay](#)

St. Joseph's Senior Secondary School, a Catholic mission school, gets engaged in [Sandwatch Project](#) by UNESCO, which seeks to develop awareness of the fragile nature of the marine and coastal environment and the need to use it wisely.



Photo from [UNESCO](#)



Photo from [TMO](#)

River Oaks Islam Center in Houston delegates a 'green team' to grow individual efforts for making a sustainable difference in their communities. They remind congregants of the Islamic imperative to act as stewards of the earth and to take care of all of God's creatures.

An ecology programme led by the **Protestant Church of South India** (C.S.I.) is reaching teachers, clergy, students and children with education about leading healthy lives, sustainable agriculture, climate change mitigation and energy saving. With more than 4.3 million members, the C.S.I. has placed ecological concerns as a key part of its constitution and mission and runs a programme to transform behaviour and systems through engaging, learner-led education. This has begun by establishing a committee for ecological concerns since 1992.



Photo from [UNESCO](#)

✚ Campaign

- 1) Participate in environmental campaigns at local, regional, national or global levels. Encourage followers to contribute to such campaigns.

- 2) Organize or facilitate the cooperation on environmental affairs among different faith-based organizations and secular sectors, environmental initiatives or projects included.
- 3) Vigorously engage in environmental management, together with civil society and governments. Voice your perspective as representatives of a religious view in these debates.



Photo from [Pixabay](#)

So far, dozens of faith-based organizations have been accredited by **UNEP**, enabling them to directly participate in UNEA as observers.



Faith for Earth Dialogue in UNEA 4, photo from [UNEP](#).

B'nai Jeshurun, a synagogue in New York, actively participates in different environment campaigns.

- As a part of **Sustainability Pilot Program by Hazon**, the project has included LED lighting upgrade, planters for the rooftop, switching to fully compostable plates and cups, etc.
- They also encourage composting and recycling at Kiddush as an outcome of the **Green Kiddush Initiative**.
- Many members of this synagogue are involved in the **Jewish Climate Action Network** and therein help with the

environmental advocacy in B'nai Jeshurun.

- Their members got involved in the **Transform Trash NYC** initiative from 2016 to the successful passage of legislation in NYC Council in October 2019. This Campaign proposed systemic changes to the commercial waste industry in New York.
- Currently, they are encouraging citizens to work for **Community Composting Initiative**.



Photo from [B'nai Jeshurun](#)

Food & Resources



Photo from [Pixabay](#)

- 1) Choose locally produced, organically grown and fairly traded products in all food and drink. Encourage sustainable meals.
- 2) In addition to food, ensure your house of worship purchases other goods sustainably sourced, fair-traded and eco-friendly, such as recycled paper, cleaning products, etc. Pay attention to supply chains.
- 3) Invest and divest ethically, for example, avoid investment in highly polluting industries.
- 4) Reduce the number of offerings at temples or ensure they are eco-friendly and not made of

single-use plastics or other harmful materials.

1,058 Hindu Temples overseen by **Travancore Devaswom Board**, commit to phasing out single-used plastic around all temple activities.



Photo from [Pixabay](#)

The **Mylapore Kapaleeshwarar Temple**, a Hindu temple, has transformed into a zero-plastic zone. Plastic bags have been banned not just inside the temple premises, but it is also difficult to find any in the shops selling puja articles for the deity. The items for offering, previously contained in polythene bags, now use bamboo baskets.



Bamboo baskets take the place of polythene bags, photo from [The Hindu](#)

Fair Trade Church, a label by eco congregation Scotland, has led many Scottish churches into fairly traded choices, like Westray Parish Church, Langside Parish Church, St Margaret's Episcopal Church and Netherlee Parish Church.



Westray Fairtrade display, photo from [eco congregation Scotland](#)

Guidelines on Green Building



Westchester Reform Temple, a green synagogue certified by LEED, photo from [WRT](#)

Without a doubt, greening the physical structure is also an essential step for your house of worship. Decarbonizing buildings is critical to achieve the Sustainable Developments Goals, due to the construction sector accounting for almost 40% of energy and process-related emissions. Taking climate action in buildings and construction is among the most cost-effective solutions⁵.

Numerous features can make a building greener, including consideration of the local environment in the design, construction and operation, designs enabling adaptation to a changing environment, efficient use of all resources, prioritization of the renewable energy, sustainable sourcing and use of materials, pollution and waste reduction measures, etc.ⁱ Also, green building rating tools and certifications can

⁵ Global Alliance for Buildings and Construction. 2019. [2019 Global Status Report for Buildings and Construction](#).

serve as the references for becoming a green building.

Certificates and Labels of Sustainable Buildings:

Faith-specific:

- [GreenFaith Energy Shield](#)
- [Green Sanctuary](#)
- [Interfaith Power and Light](#)

In Broader Scope (mainly country-based):

- [Building Research Establishment Environmental Assessment Method \(BREEAM\)](#)
 - [BREEAM-LV](#)
 - [BREEAM-NL](#)
 - [BREEAM-NOR](#)
 - [BREEAM-SE](#)
- [Global Alliance for Buildings and Construction](#) (GlobalABC), UNEP
- [GreenMark Standard for Green Buildings](#), UNDP in Kenya
- [Green Star](#), Australia
- [Green Building Index](#), Malaysia

- [Leadership in Energy and Environmental Design \(LEED\)](#)
- [Green Building Council](#), Italy

For more information, you may link to [World Green Building Council](#).

Naturally, what action is taken will depend on many factors, like how much renovation is possible, how much you wish to maintain its original structure and design and the affordability of the measures. Several such measures will end up reducing operating costs in the long run. Herein, the guidelines on green buildings are listed according to [GlobalABC](#), [World Green Building Council](#) and practices by green houses of worship⁶.

⚡ Energy & Electricity

Integrate renewable and low-carbon technologies to supply buildings' energy needs, once the design has maximized inbuilt and natural

efficiencies. Reducing and greening energy consumption is crucial in the fight against global warming.

- 1) Increase access to secure, affordable and renewable energy. Connect buildings to low-emission district energy systems or green power grid (**geothermal, biomass, wind, solar, etc.**). Otherwise, install integrated photovoltaic (BIPV), solar thermal and micro-wind renewable energy systems in your house of worship. Extra capacity could even be provided or sold to communities.
- 2) Switch to energy-efficient light bulbs such as LEDs, solar-powered LEDs and CFLs. These produce the same amount of light with a quarter of the energy, and last more than seven times longer.
- 3) Try to use natural lighting and ventilation where possible.

⁶ World Green Building Council. [About Green Building](#).

- 4) Eliminate or reduce onsite fossil fuel-burning equipment by replacing systems with equipment that uses clean energy, including highly efficient heat pump technology.
- 5) Phase out high emitting refrigerants.
- 6) Minimize energy use in all stages of a building's life-cycle. Raise people's awareness on energy saving. Switch off lights, chargers, printers, computers, heaters, and coolers when they are not being used.



Checking solar panels on top of the gurdwara in Bayan Lepas Photo from [TheStar](#)

Solar energy is a prevailing method for sustainability among houses of

worship. **Wadda Gurdwara Sahib Penang** in Malaysia is equipped with solar panels and **Sri Venkateswara Temple** in India uses solar-powered cooking technology for 30,000 meals daily.



Photo from [Treehugger](#)

Khalifa Al Tajer Mosque in Dubai uses green building materials, thermal-insulation systems and low-emission air conditioners to lower energy consumption and emissions, to control indoor temperatures.

Photo from [BeautifulMosques](#)



■ **Materials & Design**

When you are about to start a novel building or renovate an existing one, promote systemic, material-neutral, performance-based methods and models in the design and construction. Search for consultation on low-carbon materials and technologies.

- 1) Purchase low-energy and low-emission products and materials. Use fewer, more durable materials, generating less waste.
- 2) Design flexible and dynamic spaces, anticipating changes in their use over time, and avoid the need to demolish, rebuild or significantly renovate buildings to prevent them becoming obsolete.
- 3) Avoid unnecessary demolition, or try to recycle construction materials after demolition.
- 4) Avoid materials and chemicals that create harmful or toxic emissions.

Wat Pa Maha Chedi Kaew in Thailand, a Buddhist temple built out of 1.5

million recycled beer bottles, shows great creativity by using non-conventional recycled materials.



Wat Pa Maha Chedi Kaew, photo from [its website](#).

Bamboo, a sustainable and ideal construction material especially in those locations where it is found in abundance, was used for building monastic schools in **Myanmar**.



Photo from [JNEB](#)

Jewish Reconstructionist Congregation is a highly acclaimed green building,

the first platinum LEED-certified synagogue in North America.

- Its front ceremonial entrance door is made from reclaimed Maple trees harvested from the original building site that needed to be cut down for construction.
- Exterior and interior siding was reclaimed from barns in upstate New York.
- Cabinets and shelving are made from a rapidly renewable agricultural fiber product including sunflower husks.



Jewish Reconstructionist Congregation, photo from [its website](#).

💧 Water



Photo from [Pixabay](#)

Explore ways to improve drinking and waste water efficiency and management, harvesting water for safe indoor use in innovative ways, and generally minimizing water use in buildings.

- 1) Install the water systems of higher efficiency. At least, repair leaking pipes.
- 2) Encourage people to be water conscious by turning off taps and limiting unnecessary water use.
- 3) Install water catchment systems to store rainwater.
- 4) Choose local plants demanding less water for gardening.

5) If water is used in religious practices, try as much as possible to reduce the waste.

At the **Nagpada Mosque** in Central Mumbai, the use of water for the ablution is cut down by nearly three quarters, through a simple and cheap tap innovation. These taps are valves fitted with a jockey or joystick. Water flows out only when the stick is pressed. Till April 2019, 120 mosques and madrassas across India have been using these taps and the demanding is growing.



Photo from [The Times of India](#)

Green Whudu Team, an innovation team by university students from Abu Dhabi, advocates installing systems

that will allow to recycle water for the areas surrounding mosques.



A Mosque in Abu Dhabi, photo from [NYU Abu Dhabi](#)



Photo from [The Straits Times](#)

Mujahidin Mosque in Indonesia has not only promoted water conservation, but also installed low-flow devices in all its taps. Moreover, they pay attention to teaching children about the importance of saving water, and delivering water-

saving consciousness through sermons.

Gardens and surroundings

Plants and trees bring many benefits, including biodiversity, shade, improving air quality by filtering pollution and absorbing carbon, assisting in physical and mental



Photo from [Pennstate Extension](#)

wellbeing, regulating water flow and so forth⁷.

- 1) Encourage tree-planting initiatives both around and outside of your house of worship. Ensure that you plant a diversity of species and continue to care for the saplings after they have been planted. Tree planting should be more than just symbolic and needs to be done in a well-thought-out manner. You can find more comprehensive guide on [Pennstate Extension](#) and [The guardian](#).



Rowan Tree, photo from [The Guardian](#)

- 2) Consider planting fruit trees.
- 3) Start community gardens, and encourage children to get involved.
- 4) Limit the use of harmful herbicides and pesticides & seek out alternative farming methods.
- 5) Plant pollinating plants that encourage biodiversity (particularly bees).
- 6) If there are specific old trees and other valuable trees in or around the house of worship, ensure to protect them.

Some eighteen hundred years ago, Daoist communities in Sichuan, China created the first nature sanctuaries. Hunting, land clearing, plant gathering, mining and any kind of pollution of the natural surrounding was forbidden. Up to now, there are



Photo from [Tencent](#)

46 Nature Sanct uaries of Daoism across China.

Sacred Forest in or around almost every Shinto Shrine is a preservation of local flora or historical trees.



Rice paddy and woods around Kasuga Shrine in Tamba Sasayama, photo from [Wikipedia](#)

⁷ FAO. 2016. [Building greener cities: nine benefits of urban trees.](#)

Waste Management

There are many measures for pollution and waste reduction, and facilitating reuse and recycling should be emphasized as well.

- 1) Provide recycling facilities & bins. Make sure you clearly label them.
- 2) Set up composting bins/facilities for kitchen and garden wastes. If allowed, consider installing composting toilets.
- 3) Collaborate with local recycling centres or organisations involved in recycling.
- 4) Avoid generating waste as much as possible.

Devotees are used to offering flowers, garlands and other goods to the deities in Buddhist temples, which is considered as a symbol of reverence. But millions of tons of temple waste are dumped into rivers every year, eventually causing enormous pollution.

Bodhgaya Temple Management Committee, a historical Buddhist temple in India, cooperated with a dye manufacturer to transform 200kg of floral waste into natural dyes. These dyes were soaked in authentic Khadi wear, available for sale in domestic and international markets.



Photo from [ASK](#)

Flowers offered daily at the **Ajmer Sharif Dargah**, a sufi shrine in India, are recycled and used as compost for plants.



Roses in Ajmer Sharif Dargah, photo from [LIFE BeYOND NUMBERS](#)

There are many opportunities for houses of worship to green their operations and ensure that the buildings and surrounding areas are more environmentally friendly. As mentioned previously, a house of worship should ensure that they act as a centre for sustainability within the communities they serve and help to inspire their members to care for the environment.



Photo from [Pixabay](#)

In many ways, houses of worship can become greener, with just a few guiding ideas outlined above. Every house of worship should explore possibilities based on their circumstances.

What are the green houses doing?

Houses of worship of each religion have already begun to green their facilities, behavior and consciousness. Hitherto, there are more than 10,000 of them greening their sites or religious practices, according to our mapping work on green houses of worship. Certain projects are having global impacts within their own religion. More projects still are operating in a limited region. Yet few programs on such a theme radiate into multiple religions globally.



Photo from [Pixabay](#)

In terms of what the houses of worship are doing now, the greening

process is usually promising yet not complete. Nonetheless, these efforts have indicated the trend of building up green houses of worship around the world. The number of green houses of worship has soared in recent years.



Photo from [Pixabay](#)

A handful of newly constructed houses of worship and projected ones have been systematically designed into sustainable models, with those existing houses of worship processing sustainable modification to different extents.

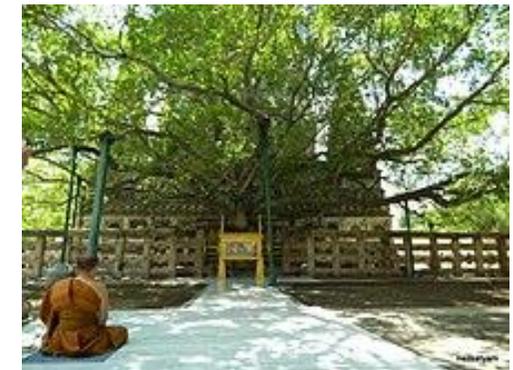
Switching to solar energy is one of the most common measures taken by those houses of worship. Others choose different renewable energy

sources depending on the local situation.

With regards to sustainable certification, synagogues and churches account for a large proportion of the houses of worship.

Regarding sustainable consumption and saving resources, a number of houses of worship are enhancing the procedures in their conventional religious rituals.

Environmental education has been highlighted since the very beginning. And planting is usually listed in the sustainable actions by green houses of worship.



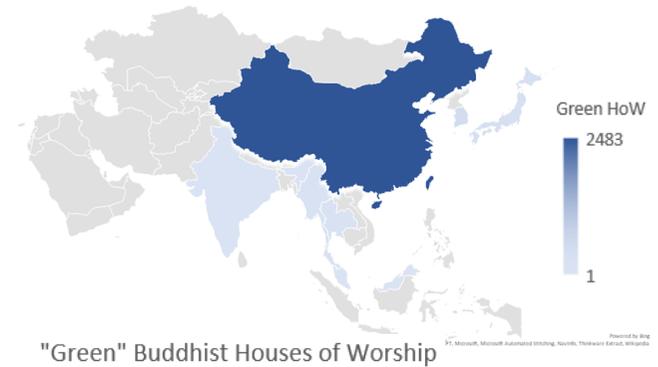
Bodhi Tree, photo from [wikipedia](#)

Buddhism

There are more than 3,000 temples of Mahāyāna that have greened or are greening their sacred sites, in East and Southeast Asia.

- As incense is a significant ritual in Mahāyāna, thousands of temples in China and Malaysia are transforming this air-polluting ceremony into more eco-friendly ways, such as reducing the amount of incense burning, using low-polluting materials, banning firecrackers, and replacing the traditional incense with digital incense or flowers.
- Large quantities of traditional Buddhist temples are constructed with wood or bamboo, the natural and sustainable materials. Interestingly, **Wat Pa Maha Chedi Kaew** in Thailand, the Temple of a million bottles, was constructed with recycled beer bottles.

- Many temples are also trying to install or connect to solar energy sources and install energy-saving bulbs in a bid to set up sustainable energy systems. A few others are trying wind electricity systems and rainwater collecting systems to improve their energy and water supply.



Eco-Temple Development **Community Project** by [International Network of Engaged Buddhists \(INEB\)](#) and [Interfaith Climate and Ecology network \(ICE\)](#) advocates:

- 1) ecological temple structure and energy system,
- 2) economic sustainability,
- 3) integration with surrounding environment,
- 4) engagement with community and other regional groups,
- 5) development of spiritual values and teachings on environment, eco-dharma.

Since 2016, they have been facilitating the installation of solar panels in the temples of Japan,

Thailand, Myanmar, China, India and South Korea. These procedures reduce their energy bills, provide a more reliable source of energy, and even a steady source of long-term income by selling excess energy back to the main grid. Thus far, some 100 temples in South Korea have participated in this project.



Solar Panels in Zhengjue Temple, China, Copyright by [JNEB](#)

Christianity

Based on an online research, already thousands of Christian churches are dedicated into a sustainability around the world. Standing alone or involved in an umbrella organization, green processes are being mainstreamed.

- Christians launched the most environmental initiatives, many concentrating on green churches.

Eco Church by A Rocha in UK, **Green Houses of Worship programme** by Interreligious Eco-Justice Network (IEJN) in US, **Green Churches Network** in Canada all push to emphasize their work about greening churches among their members.



The first church of Christ in Mansfield, a member of IEJN, photo from [website](#)

- Many churches have renovated their energy systems, switching to geothermal, biomass, solar and wind power to reduce their carbon footprint. Meanwhile, some even provide electricity to local communities.

Mount Olive Lutheran Church in Minnesota, USA, is a pioneer in geothermal and solar technology.



Mount Olive Lutheran Church, photo from [church website](#)

- Environmental education is deemed as a vital focus during preaching by some churches. Catholic churches have been deeply inspired by *Laudato Si*, like **St James Cathedral** in Seattle. Environmentalism stewardship is also valued in all other Christian branches, such as the **Flagstaff Federated Church**, a

Presbyterian church. **Associação Casa da Videira** is a faith-inspired eco-community in Brazil.



Photo from [Pixabay](#)

- Green certification has been popular for those churches who would like to be verified as sustainable.

Keystone Community Church was designed to be a green building, and it became the first LEED certified church in the USA in 2005.



Keystone Community Church, photo from [ABD Engineering & Design](#)

Daoism



Yin Yang, photo from [pixabay](#)

- Cooperating with ARC, Daoism in China has taken wide action on environment protection since 2004. So far, hundreds of Daoism temples have implemented renewable energy installation, surrounding ecosystem protection, environment education, etc.

Since 2006, a network of **Ecological Daoism Temples** have committed to environmental protection by greening the temples and areas around them. Reportedly, amongst the over 120 Daoism temples, some have switched their energy systems into biomass and solar energy. Others

are preventing erosion through planting.



Louguantai, a sacred site in Daoism, photo from [Chinadialogue](#)

They have established 6 principles for Ecological Temples:

- 1) Sage Lao Zi is the god of Ecology.
- 2) Rationally utilize surrounding landscape and natural resources.
- 3) Protect water source and construct waste management.
- 4) Use energy-saving technology and materials.
- 5) Form a base for education about ecology and environment.
- 6) Set up a harmonious relation with communities and environment.

Tiejia Eco-friendly Temple in Taibai Mountain is the first ecology Daoism Temple under the joint program with ARC. It has become a model for its

environmental education to pilgrims and practitioners.



Tiejia Tree in Tiejia Eco-friendly Temple, photo from [kknews](#)

- More broadly, Daoism temples across China are getting rid of their conventions bringing air pollution, incense and firecrackers. This ever-popular ritual is restricted or forbidden following advocacy by governments.



Incense, photo from [Pixabay](#)



Photo from [Pixabay](#)

Hinduism

Over 1000 Hinduism temples are in a greening process under the guidance of various initiatives. Plus, a few Hindu temples are proactively becoming greener, generally switching to solar energy to reduce their carbon footprint.

The Green Temple Initiative, organized by ARC, the Bhumi Project, and GPN, has even released a '[Green Temple Guide](#)' in 2015. Stemming from Pujas to the temple landscape, from food to energy, from animal protection to waste management, this guide lists specific suggestions on the sustainable enhancement of traditional and modern practices of

Hindu religions. Its members consist of Hindus, Sikhs and Baha'is.

Solar energy is a common choice amongst the temples and ashrams under this initiative in India. [Sivananda Ashram](#) in Uttarakhand, [Ambaji Temple](#) in Gujarat and the Golden Temple in Amritsar (Sikh) have worked hard on waste management in the temples.



Photo from [Sivananda Ashram](#)

An administrative body, [Travancore Devaswom Board](#), oversees all affiliated 1,058 temples in India committed to phasing out single-used plastics around all temple activities.

[BAPS Shri Swaminarayan Mandir London](#) has systematically optimized energy efficiency and low-carbon practices through using natural light,

avoiding energy waste, gardening and planting and advocating low-emission transportation amongst pilgrims. Amazingly, they have already committed to these eco-friendly efforts for more than 25 years.



Photo from [Mandir](#)



Photo from [Pixabay](#)

Islam

Muslims worldwide have vigorously contributed to enhancing the sustainability of mosques. In the Middle East, North America and Asia, faith-based organizations are carrying out projects on green mosques, some cooperating with government or other civil society.



Photo from [GIZ](#)

Together with German development Agencies, the Moroccan Ministry of Energy and the Ministry of Religious Affairs Moroccan is carrying out a **Green Mosques and Buildings Initiative** from 2015 to 2021. 600 mosques are planned to be given a makeover through LED lighting, solar thermal water heaters, photovoltaic systems and other renewable energies.

The **Green Mosques Project** in Jordan, backed by the Ministry of Religious Affairs and the Ministry of Environment, helped 400 Jordanian mosques equip solar panels.



A mosque in Tabarbour, photo from [The Jordan Times](#)



Photo form [the Lavent News](#)

In Saudi Arab, the **Environmentally Friendly Mosque Initiative** by the Environmental Green Horizons Society drives the installation of water-recycling and water-saving irrigation in mosques. Besides, they advocate to limit unnecessary plantation, aiming to reduce

unnecessary water consumption, for example, large quantities of palm trees in Riyadh.

The **Green Masjid Project** and Green Ramadan by the Islamic Society of North America have been enlisting mosques across the USA to adopt green, eco-friendly practices since 2015. Likewise, the **Cyberjaya Green Platinum Mosque Project** focuses on green mosque design for Malaysian mosques conformed to the Green Building Index. The Green Mosque Initiative by **Indonesian Ulema Council** will roll out 1000 eco-mosques through updating water and energy supply.

Of course, many mosques are also working on green projects individually. Such as, **Norderstedt Mosque** in Germany and the **Cambridge Eco- Mosque** in UK, etc.

Accordingly, about 2100 mosques are getting greener and greener.

Judaism

- More than prevailing green practices in individual synagogues, Jewish synagogues in the USA have vigorously linked themselves to green building certification or green energy certification.

Temple Solel committed to reducing its carbon footprint and populating environmental advocacy. They gained the GreenFaith Energy Shield certification in 2018.



Temple Solel, photo from [its website](#)

The **Beth David Congregation** is the first synagogue certified with LEED. Its sustainable design and materials that have minimal or no environmental impact embody the Jewish doctrine of *tikkun olam*, repairing the world.

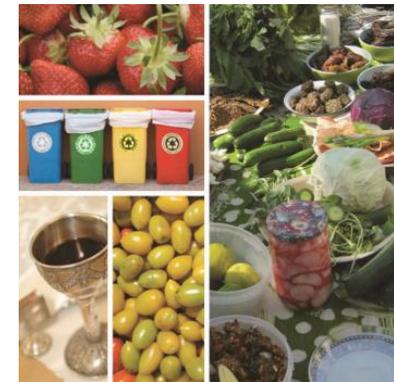


Beth David Congregation, photo from [its website](#).

- Jewish congregations have initiated several green synagogue projects in the UK and Israel, some being part of broader environmental programs. These projects mainly affect within their own countries.

Greening Synagogues by Teva Ivri provides ongoing consultations to help synagogues in the greening process, offering practical tools and strategies.

Similarly, **Eco-Synagogue**, a counterpart to Eco-Church, has set off to provide case studies, resources and tools for their registered members who are willing to act on greening their synagogues.



Green Kiddush, photo from [Muswell Hill's Green Kiddush Journey](#)



Temple Aleyah, a green synagogue, photo from [its website](#)

Shinto

- Similar to a large number of Buddhist and Daoist temples, Shinto shrines usually lie amid natural landscapes. These wooden architectures with typical Japanese style are the sacred centers of local animism.



Photo from [pixabay](#)



Photo from [pixabay](#)

- Various creatures can be revered as deities in Shinto. Plants are part of them. 'Sacred Forest', originally referring to the plant protection in or around the shrines, has become the proxy for environmental activities across Japan.



Photo from [pixabay](#)

- Another interesting fact is some famed shrines would be reconstructed every 20 years,

based on a Shinto tradition. The timbers, the construction materials for repairing, are all produced with the trees grown within the shrine land. People regard the rebuilding as an old solution to resilience after the eroding effects of time.



Ise Jingu Grand Shrine, rebuilt every 20 years, photo from [Smithsonian](#)



Kaguraden at Ise Jingu, photo from [ancient.eu](#)

Sikhism

- Based on our mapping, at least two Sikh organizations have proposed Green Gurdwara Initiatives.

Basically, the two initiatives are both encouraging Gurdwaras to take actions in renewable energy, water conservation, recycling, and organic and healthy food systems. The initiative by **EcoSikh** is global, while the similar one by **Sikhnet Africa** targets African Sikh temples.



Photo from [Nishan-E-Sikhi](#)

Photo from [EcoSikh](#)

- Simultaneously, some stand-alone gurdwaras are also devoted into green buildings.



A **projected gurdwara** in the Cardinia Shire Council region, Australia is expected to be a sustainable building.

Nishan-E-Sikhi has made efforts on sustainable reconstruction. And they have contributed tremendously towards environmental conservation.

- Sikhs have also used creative solutions for environmental education.

EcoSikh has created their own environment day, '**Amritsar Foundation Day**' in July every year.



Photo from [Pixabay](#)

They make it a day to remember the duty of protecting ecology. Having a day of green action for everyone in the city turned out to be an important way of paying attention to environmental issues. The ultimate aim is to have pilgrims coming to Amritsar visit a clean green city, and return home with ideas to diminish their own carbon footprint.

Certifications / Accreditations / Guidelines

[The Sustainable Buildings and Climate Initiative \(SBCI\) in 2006.](#)

[The Sustainable Social Housing Initiative \(SUSHI\)](#)

[The Sustainable Buildings Policies in Developing Countries \(SPOD\)](#)

[UNEP-FI work on Energy Efficiency](#)

[Global Alliance for Buildings and Construction - IEA, GlobalABC & UNEP](#)

[The GreenMark Standard for Green Buildings \(for Kenya & Africa\)](#)

[Framework Guidelines for Energy Efficiency Standards in Buildings](#)

[Sustainable Buildings and Construction \(SBC\) - UN affiliated](#)

[UNECE Joint Task Force on Energy Efficiency Standards in Buildings](#)

UNEP Resources

[Climate Friendly Buildings and Offices: A Practical Guide](#)

[Buildings and Climate Change: A Summary for Decision Makers](#)

[Design for Sustainability: A Step by Step Approach](#)

[Design for Sustainability: A Practical Approach for Developing Economies](#)

[Kick the Habit: A UN Guide to Climate Neutrality](#)

Other Common Certificates / Frameworks

[Leadership in Energy and Environmental Design \(LEED\) - framework developed by US Green Building Council \(USGBC\)](#)

[Building Research Establishment](#)

[Environmental Assessment Method \(BREEAM\)](#)

[Green Sanctuary Congregation - through Unitarian Universalist Association](#)

[Green Building Initiative \(GBI\)](#)

[BuildingGreen](#)

[List of EPA approved green building standards \(US-centric\)](#)

[Earth Care Congregation - has many affiliated camps/sites/churches \(USA\)](#)

[Whole Building Design guide](#)

[Interfaith Power and Light](#)



Some of proclaimed Houses of Worship

While there are hundreds of such houses of temples on our database, we are only including a random list from different religions.

Bhuddism

Sukhavati Eco-Temple
 Shwenadi Monastic School
 Laythar Taung Monastic School
 Wannitayon Monastic School
 Naungtaung Monastic School
 Wailuwun Monastery-Based Vocational School
 Bodhi Hill Learning Community
 The Smart Pagoda
 Wat Doi Pasom (The Temple of Buddha Relics)
 Juko-in Temple
 Kenju-in Temple
 Zhengjue Temple
 Guanfu Monastery
 Yunfeng Monastery
 Dongshan Monastery
 The Sunshine Temple Project
 Tera Energy: Temples Providing Clean Energy
 Wat Pa Maha Chedi Kaew

Longshan Temple
 Poh Em Shih

Christian

Keystone Community Church
 George W. Truett Seminary, Baylor University
 Bridge of Allan Parish Church
 Emerson's Unitarian Universalist Church
 Dominican Sisters' House of Formation
 The Green Church -
 Mount Olive Lutheran Church in Minneapolis
 Monastery of Saint Pishoy
 Hunter Presbyterian Church, Lexington
 Wooden Cross Lutheran Church in Woodinville
 St. Gabriel's Passionist Parish in Toronto
 Flagstaff Federated Church
 St James Cathedral, Seattle
 St. Joseph's Senior Secondary School
 St Brigid's Catholic Church
 Associação Casa da Videira
 St Lukes, Anglican Church of Canada
 Annunciation Byzantine Catholic Church
 Coral Gables United Church of Christ
 Church of South India

Islam

Green Mosque Initiative (Morocco) 2015-2021
 Tadamet Village
 Koutoubia Mosque Marrakech
 Environmental Green Horizons Society - Environmentally Friendly Mosque Initiative
 Green Mosques in Jordan
 Indonesia Council of Ulema Green Mosque Initiative
 Islamic Community Center
 ISGH River Oaks Islamic Center
 Khalifa Al Tajer Mosque
 Cyberjaya Green Platinum Mosque Project
 Cambridge Eco-Mosque
 Msheireb Mosque
 Hui Mosque
 Norderstedt Mosque
 Islamic Association of Greater Hartford, Berlin
 The Muslim Coalition of Connecticut

Judaism

Temple Aliyah
 Temple Solel
 Congregation Emanu-EL
 Congregation B'nai Jeshurun
 Westchester Reform Temple
 Jewish Reconstructionist Congregation

Beth David Congregation
Ohev Sholom - "the National Synagogue"
Temple Israel
Green Synagogue Rezekne

Sikhism

Sikh Temple in Melbourne
Nishan-E-Sikhi
Pingalwara
Wadda Gurdwara Sahib Penang

Hinduism

BAPS Shri Swaminarayan Mandir London
BAPS Shri Swaminarayan Mandir Chino Hills
Sri Venkateswara Temple
Northampton Kutumb Center (in planning)

Daoism

Tiejieshu / Tiejia Ecological Daoist Temple
The Louguantai Temple
Longmen Cave Daoist Temple
White Cloud Temple
Wo Yunshan
Zhen Wu Guan
Ziyangong Daoist temple of Tiantai
Jinxianguan temple near Xian
Jade Spring Temple
Woyunshan Daoist temple
Xian Eight Immortals Temple

Chongyan Palace Temple of Hu
Laomudian Temple
Jingtaiguan Temple
Taiheshan Temple
Mingeshegong Temple
Xiangxi Cave Temple
Jiangsujurong / Yuanfu Wanning Temple
Purple Cloud Temple
Town God Temple

Shinto

Hikawa Shrine 氷川神社
Amanuma Shrine 天沼神社
Kamo Shrine 加茂神社
Eagle Shrine 鷲神社
Inari Shrine 稻荷神社
Nakayama Shrine 中山神社
Shinmei Shrine 神明神社
Hikawasha 氷川社
Body shape shrine 身形神社
Okubo Shrine 大久保神社
Takihiuri Shrine 多氣比売神社
Cho Shrine 調神社
Adachi Shrine 足立神社
Mutsu Shrine 睦神社
Hikawa Woman Shrine 氷川女體神社
Eagle Shrine 鷲神社
Shige Shrine 重殿社
Daimon Shrine 大門神社

Minegaoka Hachiman Shrine 峯ヶ岡八幡神社
Warakubi Shrine 和樂備神社

Others

Changmingsheng Don, Taizhong
Zhengcheng Buddhism Temple, Taizhong
Chongshengbao Temple, Taizhong
Haode Temple, Taizhong
Chongzhengbao Gong, Taizhong
Tianyi Gong, Taizhong
Cixing Teaching Don, Taizhong
Zhonghong Buddhism Temple, Taizhong
Nature Shengdao House, Taizhong
Taihuang Gong, Taizhong
Zhenghe Temple, Taizhong
Chonghua Buddhism Don, Taizhong
Jiaohua Buddhism House, Taizhong
Tianbao Buddhism House, Tanzi, Taizhong
Zhaoping Yuhua Don, Nantou



FAITH FOR EARTH

