



The Global Catholic
Climate Movement



ECO-PARISH GUIDE

BRINGING LAUDATO SI' TO LIFE

**A practical guide for Catholic parishes and communities to reduce emissions
and take action on climate change.**

**Written for Catholic parish priests, pastors and staff,
pastoral councils and Care for Creation Teams**

WELCOME

DEAR PARISH LEADERS AND MEMBERS,

Pope Francis' encyclical *Laudato Si'* challenges us to *Care for Our Common Home* by growing in faith, hope, and love. To live in healthy relationships with God, neighbor, and all creation. We are called to be ecological citizens, to make prudent decisions, and to take sometimes bold actions. In the particular matter of climate change, we are cautioned to reduce emissions of pollutants like carbon dioxide when it is in our control. By doing so we will nurture and support human life in all its stages, as well as protect the goodness and beauty of God's great gift of the natural environment.



In short, living *Laudato Si'* embodies the common good.

Under the Paris Agreement, countries have agreed to limit warming well below 2 degrees C (3.6 degrees F), and strive for 1.5 degrees C (2.7 degrees F), above pre-industrial levels to avoid some of the worst impacts of climate change. Meeting this goal will require the prayers and help of every organization and person. Caring for our common home is our shared moral responsibility and a radical shift by us all towards zero carbon needed.

"In the heart of this world, the Lord of life, who loves us so much, is always present. He does not abandon us, he does not leave us alone, for he has united himself definitively to our earth, and his love constantly impels us to find new ways forward. Praise be to him!" – Pope Francis, *Laudato Si'* ¶245.

Parishes have an important role in reducing greenhouse gas emissions because as a Church we operate more than 220,000 parishes globally, which accounts for many times more churches, rectories, offices, other parish buildings, and vehicles that, in using conventional fossil fuels for energy, contribute directly to climate change. Energy savings of as much as ten percent can be achieved in a parish simply through conscious and continuous efforts to use less energy. With some modifications or upgrades to facilities, parishes have enjoyed savings of twenty to thirty percent, and even more in some cases. I also want to encourage parishes to embrace renewable energy, as many are already doing all over the world.

Often the people who can help a parish with such efforts are in the pews, waiting to be asked or given direction. Forming a *Care for Creation Team* (more generally known as a *Green Team*) is a good way to start. Towards that end, you are encouraged to use this Guide, which provides practical steps and case studies from parishes around the world that are reducing their greenhouse gas emissions, and much more.

Catholic parishes and parishioners, by taking action to reduce emissions, by inspiring and engaging members, by speaking out and reaching out beyond our boundaries, will make all the difference in, and for, the world.

Sincerely Yours in Christ,

TOMÁS INSUA
Global Coordinator,
Global Catholic Climate Movement

CONTENTS

The GLOBAL CATHOLIC CLIMATE MOVEMENT (GCCM) offers this Climate Action Guide for Catholic Parishes to assist parish leaders and members in bringing the Papal encyclical *Laudato Si'* to life. We welcome all who may find it useful.

ABOUT THIS GUIDE	2
GETTING STARTED	6
REDUCING PARISH EMISSIONS	7
INSPIRING PARISHIONERS	20
ADVOCACY AND SOLIDARITY	31
BENCHMARKING AND CERTIFICATION	39
RECOMMENDED RESOURCES	42
CLIMATE ACTION IDEA CHECKLIST	44
EXEMPLARY WORK FROM AROUND THE WORLD	
Africa: CYNESA, Nairobi, Kenya	28
Regina Mundi Church,	
Johannesburg, South Africa	28
Turkwel Parish, Turkana, Kenya	41
Asia: Caritas Myanmar and Local Parishes	36
Malate Church, Manila, Philippines	23
Nativity of the Blessed Virgin Mary, Singapore	30
St. Peter, Bandra, Maharashtra, India	16
Europe: Ballineaspig Parish, Cork, Ireland	41
Cathédrale Notre Dame de Paris, Paris, France	23
St. John Bosco, Woodley, Berkshire UK	30
North America: St. Francis of Assisi, Triangle, VA USA	41
St. Joseph the Worker, Thornhill, Ontario Canada	36
St. Teresa of Avila, San Francisco, CA USA	11
Oceania: Catholic Agencies Working in Fiji	37
Holy Family, Emerton, NSW Australia	32
St. Patrick's Cathedral, Auckland, New Zealand	38
South America: Our Lady of El Cisne, Tena, Napo, Ecuador	21
São José dos Campos, São Paulo, Brasil	24



Copyright 2016 Global Catholic Climate Movement (GCCM)
Permission is hereby granted to translate, print, and distribute this Guide.
The GCCM Eco-Parish Guide is not for commercial sale.

Nature cannot be regarded as something separate from ourselves or as a mere setting in which we live. We are part of nature, included in it and thus in constant interaction with it.

- Pope Francis, Laudato Si' ¶139

ABOUT THIS GUIDE

The **GCCM ECO-PARISH GUIDE** offers guidance on bringing Pope Francis' encyclical Laudato Si' to life. We focus on practical actions that are well within our capabilities and our means—actions that contribute both to stabilizing the global climate and caring for those who are being harmed by climate change.



WHY ADDRESS CLIMATE CHANGE?

"Human-induced climate change is a scientific reality, and its decisive mitigation is a moral and religious imperative for humanity."

The experiences of many across the globe who live and work closely with nature speak to a changing climate. Science is explaining why. Humanity burns fossil fuels like oil, gas, and coal for energy. This emits carbon dioxide, a gas that has been called "a heat trapping blanket" because it helps our atmosphere retain the sun's energy, which keeps our planet warm enough to sustain life. Over recent years, growing amounts of carbon dioxide from human activity have added to this natural heat-trapping quality. Changes in land use and clearing forests escalate this process. We're already seeing the effects of this excess heat in our atmosphere, which particularly impact the poor

The Earth's 2015 surface temperatures were the

1 Declaration of Vatican Meeting on Human Trafficking and Climate Change, July 2015

warmest since modern record keeping began in 1880.

- As science predicts, the intensities of storms, precipitation rates, floods, heat waves, and droughts are trending upwards around the world. In 2015, for instance, there were severe droughts in India, Thailand, southeastern Brazil, and western USA. In the same year, there were record floods in Myanmar, northern England, and the Midwestern region of the USA.
- In many areas, sea level rise is causing higher amounts of coastal flooding both during normal tidal cycles and storm events. Some island communities are now being faced with a choice of whether or not to stay in their ancestral homes.
- The toll of global climate change is rising. The World Health Organization expects that between 2030 and 2050 climate change will cause approximately 250,000 additional deaths per year from malnutrition, malaria, diarrhea, and heat stress².

Both out of respect for God's creation and out of love for those who are suffering from its degradation, climate change is a moral issue for Catholics. While social and environmental issues vary widely from place to place, global climate change is a serious concern that unites us.

WHAT WILL IT TAKE?

In December 2015, representatives of 196 nations adopted the historic Paris agreement at the twenty-first session of the Conference of Parties (COP21). This landmark climate agreement is to hold the increase in global average temperature to well below 2 °C and to pursue efforts to limit the increase

2 World Health Organization, Climate change and health, Fact sheet N°266, updated September 2015

to 1.5 °C above pre-industrial levels. According to a recent report from the World Resources Institute³:

"To achieve GHG neutrality with a likely chance of limiting warming to below 1.5 degrees C, we need to reduce GHG emissions according to the following timeframe:

- Carbon dioxide emissions have to drop to net zero between 2045 and 2050
- Total GHG emission need to decline to net zero between 2060 and 2080"

GHG neutrality means a net emissions of zero. It is achieved by reducing emissions as much as possible, and then offsetting any remaining emissions with an equivalent amount of removal and sequestration, for example, by re-planting forests that had been cleared. GHG neutrality necessitates, among other things, a global shift away from fossil fuels and a massive uptake of renewable energy worldwide.

WHY CATHOLIC PARISHES?

Keeping global temperature rise below the dangerous 1.5 °C threshold needs everyone's help. Parishes have an important role because, as a Church:

- we operate more than 220,000 parishes globally, which adds up to many more times this in church buildings, offices, rectories, and other parish buildings, as well as vehicles that, in using conventional energy, contribute directly to climate change;
- we are actively and credibly engaged in the lives of parishioners whose lifestyle choices impact the global climate;

3 COP21 Q&A: What is GHG Emissions Neutrality in the Context of the Paris Agreement, Kelly Levin et al., World Resources Institute website, December 11, 2015



- we have a strong tradition of influencing policy and of helping those in need far beyond our parish borders;
- we trust in God's life-giving grace, which makes us a people of hope

WHO MIGHT USE THE ECO-PARISH GUIDE?

We welcome all to use the ECO-PARISH Guide.

In particular, this Guide has been written for Catholic parish priests, pastors and staff, pastoral councils and Care for Creation Teams, and any parishioner who would like to help. This Guide could be useful for parishes that:

- have held events about Laudato Si' and would like to now put it into practice
- are just starting to work on care for creation
- are working on care for creation, but not specifically on climate change
- are working on climate change and would like more ideas

Most of the actions in this Guide can be taken **without any budget** by volunteers who have **no special expertise in climate change**.



We are faced not with two separate crises, one environmental and the other social, but rather one complex crisis which is both social and environmental.

- Pope Francis, *Laudato Si'* ¶139

USING THE GCCM ECO-PARISH GUIDE

The actions within this Guide are designed around three spheres of influence: the first is the parish organization itself, the second is the parish congregation, and the third is the global Catholic community and the people we serve. Ultimately, as Catholics, we are concerned with all three.

These actions can be taken in any order and virtually at any time. Forming a Care for Creation Team is an excellent way to get started and to sustain the effort. Likewise, monitoring energy use is helpful at the start of an energy conservation campaign, but lack of precise data need not stop anyone from trying to save energy.

START WITH THE EASY TASKS

Most of the ideas in the GCCM Eco-Parish Guide can be implemented easily and with little or no cost.

Regular events such as hospitality gatherings can be made greener. Energy savings and green purchasing can in fact save money. And those savings can then go to help the needy, help the parish with its expenses, or be reinvested into even more creation care efforts.

The very concept of *Caring for Creation* lends itself to special prayer services, homilies, and parish bulletin articles. Because of the role of creation in the sacramental life of the Church—which uses water, bread, wine, and plant oils—religious education can include themes on the goodness and order of creation. There are many ideas for prayers and devotional practices that stress the Church's teachings on creation. You can find such ideas at the GCCM website or in those of many of the other organizations referenced in the resource listing at the end of this Guide.

A few of the ideas in the GCCM Guide require more effort. Saving energy through systematic replacement of inefficient light bulbs, electrical devices, and appliances can be done within the existing parish budget since energy efficient devices often cost no more than conventional ones. The challenge is having the right person or team to follow through on every replacement purchase. Fortunately, many local power utilities and governments have programs to help with energy efficient choices.



More rigorous energy saving programs often require “benchmarking” to gather accurate energy use data, so some expertise in energy may be needed. “green certification” programs typically require an organized approach, a variety of actions, and a sustained effort over a period of months or years.

Investing in projects for energy savings and/or renewable energy usually requires funds at the start of the project. Here again, local utilities and governments may offer grants or other funding programs to help.

Even without such assistance, energy saving projects should pay for themselves over time. For renewable energy projects, payback may depend on the local policies and incentives.

WHERE TO LOOK FOR MORE HELP

There are many good resources on faith and climate change available free online. In addition to international resources available from GCCM, support is available from Catholic organizations in several countries, including CAFOD in England and Wales, Catholic Earthcare Australia, and the Catholic Climate Covenant in the USA.

In these and many other resources, Catholic parishes working on climate change will find help in areas such as:

- ▣ resources on *Laudato Si'*
- ▣ care for creation prayers, special liturgies, and homily themes

- ▣ area-specific advice and/or calculation tools to help with energy conservation and the use of renewable energy
- ▣ information on lifestyle choices and their impacts
- ▣ insights and petitions relating to policy and law (local, national and/or international)

We do not attempt to reproduce such content here, but rather to guide our readers to helpful and reliable existing resources, both religious and secular. See the Recommended Resources section at the end of this Guide for a list of documents and organizations that inspired us during the preparation of the GCCM Eco-Parish Guide.



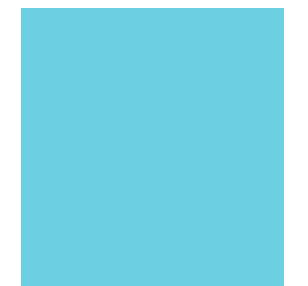
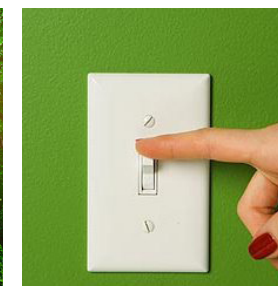
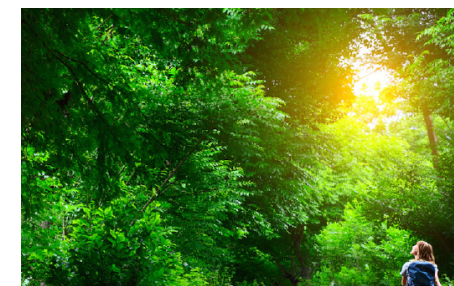
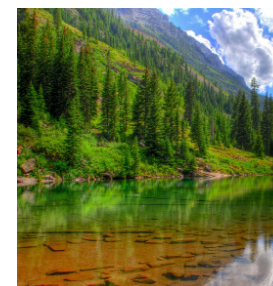
PARISH ORGANIZATION



PARISH CONGREGATION



GLOBAL CATHOLIC COMMUNITY



The ecological conversion needed to bring about lasting change is also a community conversion.
- Pope Francis, Laudato Si' 1219

GETTING STARTED

For Catholics, climate action begins with people who hear and respond to God's call to protect creation and to help their brothers and sisters.

A first step is thus to identify people in the parish who are interested and willing to help. Often the people who can help are in the pews, waiting to be asked.

The initiative for parish action on climate change often comes from the pastor or a parish priest or deacon. It may also come from religious sisters and brothers within the parish. Or it may come from the laity, such as the pastoral council. Wherever the initiative comes from, it is important to get others on board, particularly the parish leadership.



Fr. Michael Greenwell, O. Carm., Pastor of St. Teresa of Avila Parish in San Francisco, CA (USA) about why he started saving energy at the parish: "This started with the pastor being cheap!"

Miss Rita Belletty, co-founder, St. John Bosco LiveSimply Group in Woodley, Berkshire (UK) about how the group got started; "The initiative to "green" the parish resulted from a conversation with my friend Paul Draper. We both felt that the issue of global warming and its impact on the poorest people, who had done the least to cause it, was so important and urgent that it needed wider dissemination. Our Parish Priest agreed and gave us the go-ahead."

WHO TAKES THE FIRST STEP?

Fr. Kevin Downey, O.F.M., Pastor of St. Francis of Assisi Parish in Triangle, VA (USA) explained, "Environmental stewardship is part of our DNA as Franciscans. The call by our Province (the Franciscan Friars of Holy Name) encouraged us to step up the bar."

Fr. Errol Fernandes, SJ, Parish Priest of St. Peter's Parish in Bandra, Maharashtra (India), regarding the solar project at St Peter's Church and its parish school, said "This project was recommended to the parish by an ex-student of St Stanislaus High School."

Fr. Gregory Jacobs, SJ, Parish Priest of Holy Family Parish in Emerton, NSW (Australia) said "It helps to have the top job."

FORMING A CARE FOR CREATION TEAM

Forming a *Care for Creation Team* (sometimes known as a Green Team) is a good way to start working climate change as part of more general environmental issues. The Episcopal Ecological Network provides a good explanation on the role and structure of Green Teams that can be used in Catholic parishes. One common characteristic of the teams is that with approval from the pastor they take action themselves—they are not just there to provide advice and recommendations to others.

WHO IS ON THE CARE FOR CREATION TEAM?

Parish Care for Creation Teams are made up almost

entirely of volunteers. Here are some particularly helpful attributes for team members: good working relationship with parish leadership; access to parish energy bills; understanding of the parish buildings, particularly their heating, cooling, and electrical systems; knowledge about energy and climate change; involvement in faith formation instruction; a deep sense of caring for God's creation.

Care for Creation Teams typically meet once or twice a month. Team projects and activities typically include prayer and liturgy; education and awareness on environment and climate change; practical projects like recycling and saving energy; and actions in relation to social and environmental justice issues. A Care for Creation Team might take on any of the projects in this Guide.

WHAT DOES THE CARE FOR CREATION TEAM DO?

The Care for Creation Team:

- identifies environmental issues of concern in the parish such as climate change, drought, environmental justice, or parish energy use
- shares ideas and recommends projects and activities for approval by the parish leadership
- plans and carries out projects and activities approved by the parish leadership
- reviews and reports project results to the parish leadership and fellow parishioners

The parish Care for Creation Team may benefit from outreach to other similarly minded organizations, including their diocese, Catholic and interfaith groups, as well as city and regional government entities. Care for Creation Teams avoid using the Church to promote commercial or political interests and positions not specifically endorsed by the Church.

There are two key success factors for Care for Creation Teams: to meet regularly and to have the support of the pastors and parish priests. These two factors create a high likelihood of appropriate actions in the parish context.

A fragile world, entrusted by God to human care, challenges us to devise intelligent ways of directing, developing and limiting our power.
- Pope Francis, Laudato Si' 178

REDUCING PARISH EMISSIONS

As noted earlier, global climate change is due mainly to the excess accumulation in the atmosphere of greenhouse gases (also known as GHGs), primarily carbon dioxide, but also other potent heat-retaining gases such as methane and hydrofluorocarbon refrigerants. While these gases are naturally occurring, human activity is elevating their levels in two ways:

- the burning of coal, oil, and natural gas
- changes in land-use, particularly deforestation

REDUCING GHG EMISSIONS IS A FUNDAMENTAL STEP TOWARDS STABILIZING THE GLOBAL CLIMATE

The parish carbon footprint is a measure of parish

GHG emissions. Direct energy use, including fuel and conventional electricity, is typically a major component of the parish carbon footprint. Other components include indirect energy use, e.g. energy used in commercial travel and the production, packaging, transportation, and final disposition of goods and supplies used by the parish. There are tools that can help measure this footprint. In the USA, for instance, Interfaith Power and Light's *Cool Congregations* program has an online tool that can be used to estimate a parish carbon footprint.

Energy is a precious resource and a gift from God. In whatever form it reaches and serves us, it should be used conservatively. Careless and wasteful use of energy and other precious resources is an unfortunate characteristic of consumption-driven



throwaway cultures; it has no place in parish life.

Most parishes can reduce emissions and save money by saving energy. In many parts of the world, parishes can benefit from free or low-cost government and utility-based programs promoting energy efficiency through facility audits, building insulation, light bulb replacement, and many others.

Renewable energy such as solar power is also an effective way to reduce emissions. Unlike fossil fuels, renewable energy use does not diminish the resource, which is continually renewed by the forces of nature.

ENERGY USE IN PARISH BUILDINGS

Buildings consume energy for heating, ventilation, and air conditioning. All the appliances and devices we use, including lighting, refrigeration, and cooking, use even more energy. Worldwide, buildings account for a nearly a third of total final energy consumption⁴. Much of this energy is derived from conventional fossil fuels. Thus it is important for all organizations, large or small, to help reduce use of energy in buildings by being more efficient.

Energy-efficient church and parish buildings can be welcoming, well lit, well ventilated, beautiful, and comfortable. The goal is energy efficiency, not saving energy by skimping on basics. GreenFaith.org provides an excellent online slide presentation on saving energy in parish buildings.

FUEL USE IN PARISH VEHICLES

If the parish owns or operates diesel, gasoline, or

petrol-powered vehicles, then the fuels used in these vehicles also contribute to the parish carbon footprint. While the parish does not necessarily control the fuel economy of its vehicles, the parish does have the choice of which vehicle to use and when to use it.

FOUR KEY STEPS TO ENERGY SAVINGS

Realizing the benefits of energy savings has *four key steps* summarized below and described in greater detail in the following pages.

1. **Monitor actual energy use.** Keep track of the energy bills and add up the annual total for each type of energy.

How much can be saved? Monitoring energy use doesn't actually save energy. But it helps to motivate people and to verify actual savings.

2. **Eliminate energy waste** by adopting energy saving habits.

How much can be saved? If little effort has been made to save energy before, a parish might save as much as ten percent of total energy costs by conscientiously promoting energy saving habits.

3. **Lock in energy savings step by step** by systematically replacing worn out items with modern high efficiency ones.

How much can be saved? Again, if little has been done before, a parish might save up to ten percent of total energy costs over a period of one to three years. Moreover, once installed these savings are "locked in," the parish will continue to benefit.

4. **Invest in energy saving technologies.** While these often have an upfront cost, they typically pay for themselves over time through energy and cost savings.

How much can be saved? Every parish is different. A professional energy audit is a good way to identify potential energy savings and to estimate project costs and savings. What a parish saves from a project becomes a true savings after the initial investment is paid back. As a general rule, many energy saving projects offer *payback periods* of three to seven years.

⁴ International Energy Agency, online FAQs, 2015, <https://www.iea.org/aboutus/faqs/energyefficiency/>

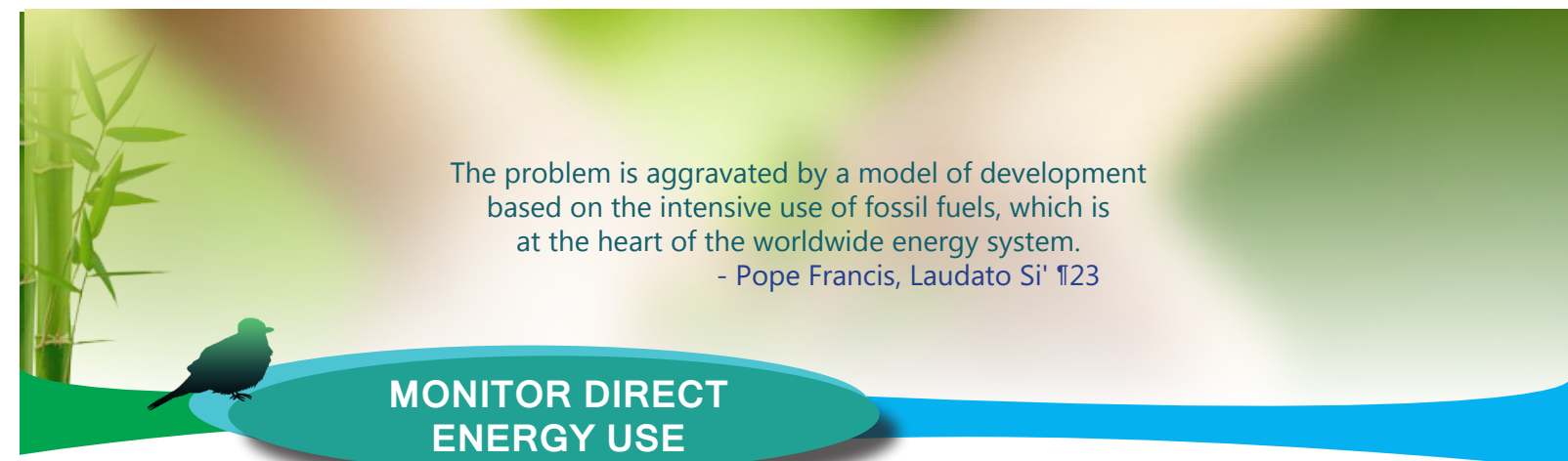
WATER, ENERGY, AND CLIMATE CHANGE

The meteorological impacts of climate change increase the stress on water supplies in many parts of the world. Rising ambient air temperatures increase rates of evaporation. It also increases the demand for water and electric air conditioning. Moreover, production of conventional electricity requires a considerable amount of water. As a result, rising temperatures tend to decrease availability of fresh water while demand increases.

In some parts of the world, global climate change is leading to record flooding. Flooding and other severe weather events can cause fouling of fresh water reserves and overwhelm drainage systems that were designed decades ago. Rising sea levels can lead to intrusion of seawater on fresh water sources. Even when there is "too much water," fresh water supplies can be threatened.

Water conservation is therefore a key strategy to address climate change. Water conservation and energy conservation go hand in hand.

Your parish may also wish to examine how its property handles rainwater. Poorly designed or maintained "stormwater" systems can not only pollute nearby waterbodies, they may also contribute to local flooding. As part of this study, a parish may wish to examine the use of storing rainwater from downspouts and drainage systems. That water can then be used for landscaping purposes during times of dry weather.



The problem is aggravated by a model of development based on the intensive use of fossil fuels, which is at the heart of the worldwide energy system.
- Pope Francis, Laudato Si' 123

MONITOR DIRECT ENERGY USE

Every decision to turn off an unnecessary light or adjust the thermostat on a heater or air conditioner produces valuable energy savings. However, the greatest benefits are achieved through concerted effort when energy use is directly monitored and reported transparently to the parish at large. When the results are public, more people are likely to engage in delivering the intended outcome. This may also encourage them to do the same at home.

Direct energy use at the parish typically includes:

direct combustion of fuel for heating, cooking, and transportation

use of electricity for lighting, refrigeration, communications, computers, and other electrical appliances

These two types of energy use are usually easy to monitor because the cost of energy has to be paid. To the extent that the parish benefits significantly from donations of fuel or electricity, some effort should be made to account for these as well.

A parish's energy bills will typically specify the exact amount of energy used during each billing cycle. Energy used by electric vehicles will also be reflected in the electricity bill, and so as long as the parish vehicles are charged at the parish, it does not need to be calculated separately.

If the parish owns or regularly uses conventional vehicles, such as cars, vans and buses, these will add to the parish carbon footprint. Vehicle emissions do not take place at the parish, but rather en route to and from parish activities. Nevertheless, they are within the direct control of the parish. If the fuel for parish vehicles is purchased using a fuel credit card, then the number of gallons or liters of fuel purchased should be indicated on the statements. However, if cash or other credit cards are used, it may not be easy to convert expenditure to fuel. Fuel cost could be tracked instead of fuel use, but actual savings may be masked by changes in fuel prices. In this case, quantity of fuel used can be estimated from the total cost fuel and an average fuel price.

Whether in buildings or in vehicles, it is often the case that we would have to pay more or less this year to use the same amount of energy as we did last year. The price of energy varies from day to day and from place to place. While oil prices declined in 2014 to 2015, electricity prices have tended to remain flat or to increase. Parishes that produce their own energy from renewable resources are not subject to such rising costs.

When tracking energy use, it is essential to record it regularly over time. Tracking can be as simple using a spreadsheet to enter monthly energy bill and vehicle fuel use data. Typically there are columns for billing date, billing period, quantity of energy used, and energy cost. If the billing period does not coincide with calendar month or year, the energy provider may provide subtotals for that portion of the bill that falls in the prior period vs. the current period.

Month-to-month comparisons may have little benefit if energy use depends on the weather, daylight hours, and the liturgical calendar. It is almost always helpful—in fact it is energy industry practice—to compare a recent full twelve months to a prior twelve months, whether these are a calendar year, a financial accounting year, or just the most recent twelve monthly billing periods.

Comparing energy used this month to the energy used during the same month a year ago also provides useful information. Many energy utility bills include information about energy used per day in the latest billing period and, for comparison, for the same period in the previous year. Daily average energy use is helpful when the number of days in a billing period varies from month to month and from year to year.

While it is relatively straightforward to keep track of energy use, it is necessary for someone to be responsible for it, and for the responsible person to have regular access to the energy bills. If possible, the person who reviews and/or approves energy bills for payment would be the ideal person to track parish energy use. This person would be a valuable member of the parish Care for Creation Team.

Once total energy use of each type is known, it is easy to track trends and changes. Sometimes energy use goes up despite efforts to conserve. This can happen because of more severe weather, one-time projects, or an increase in parish activities. An increase in energy use in the service of the pastoral mission is not a failure. It is important to stay the course of energy conservation, even if energy use increases for a time.

When total use of each kind of energy is known, the resulting GHG emissions can be calculated⁵. The GHG content of typical fuels such as gasoline/petrol, diesel, natural gas, oil, and others is well known⁶. For electricity, the electricity utility company often discloses the **GHG emissions factor**. Emissions factors and carbon content are used to convert energy use into GHG emissions.

Different fuels are billed in different units—such as gallons for gasoline, liters for petrol; therms for natural gas; kilowatt hours for electricity. Moreover, different forms of energy have different carbon content, hence different GHG emissions factors. Some expertise may be helpful to calculate GHG emissions from raw energy use data.

There is no need to be overly concerned about different kinds of energy and their carbon content. Instead, each type of energy can be compared separately: e.g. electricity used this year compared to electricity used for the same period last year. Even if emissions are never calculated, the **direct monitoring of energy use alone** can provide substantial support to energy conservation measures and help parishes reduce emissions.

⁵ Greenhouse Gas Protocol, World Resources Institute / World Business Council for Sustainable Development

⁶ Emissions factors for Greenhouse Gas Inventories, US Environmental Protection Agency, 4 April 2014

GREENHOUSE GAS EMISSIONS INVENTORY

ST. TERESA OF AVILA PARISH

San Francisco, California USA



Fr. Michael Greenwell, O. Carm., Pastor at St. Teresa of Avila, said: "Towards the end of 2013, we added insulation to the priory as a hedge

against future energy costs." It is an older building, and the contractor had to drill holes from the inside, to all the exterior walls the priory, and blow the insulation into the spaces between the studs.

The parish also took a number of other measures to save electricity, including systematic replacement of worn out light bulbs and devices with modern efficient ones at both the church and the priory. At the end of 2014, the parish summed up its energy use and prepared an

inventory of GHG emissions for comparison with the previous year. As a result of energy conservation measures, the parish saved 36% on natural gas, 8% on electricity, and 18% on its total energy cost (relative to what it would have paid in 2014 to use as much energy as they did in 2013). The parish energy savings reduced parish emissions of GHGs by 30% in one year.

As of 2015, the parish monitors its energy use through US EPA Energy Star Portfolio Manager.

If we want to bring about deep change, we need to realize that certain mindsets really do influence our behaviour.
- Pope Francis, Laudato Si' ¶1215

ELIMINATE ENERGY WASTE

Perhaps the least expensive form of energy savings is through our own actions, such as turning off a light when leaving a room. It costs nothing. What is required instead is an attention to turning things down or off when they are not being used. Energy savings of as much as ten percent can be achieved simply through conscious and continuous efforts to use less energy.



Turn it off. Lights, computers, media equipment, fans, stand-alone heaters, and air conditioners should be turned off when not in use. To be sure

that power is off, unplug them (when it makes sense to do so). Power strips make this easy—and some power strips provide the added benefit of power surge protection.

Turn it down. In buildings with heating or air conditioning, there is probably energy to be saved through careful control of the temperature setting, both when people are there and, even more important, when they are not. Many countries, such as Japan, have national guidelines for indoor temperature settings and ask us all to dress appropriately for the weather, so as to rely less on heating and air conditioning for our comfort. As people become more aware of the need to save

energy, expectations on heating and cooling have started to change.

When a space will be unused for a few hours or more, it is important to change the temperature setting to the appropriate “set back” temperature as soon as people leave. This is a temperature that will keep the building pipes from freezing, mold from growing, or other kind of damage, and from which the building can be returned to comfortable conditions starting an hour or so before people return.

The ideal setback temperatures may depend on the weather and on the building itself. During the heating season, 55 to 62°F (13 to 17°C) is a typical set back temperature for overnight and for days on which a building is not used. It is important to keep the **building above freezing to prevent water pipes from bursting, and also above the dew point temperature to prevent mold growth** from condensation inside walls and elsewhere. In the cooling season, a set back might be as high as 78 to 90°F (26 to 32°C).

CONSOLIDATE

Whether it is meeting rooms or refrigerator space, try to match the size to the need. If there are two refrigerators, but one sits nearly empty for thirteen out of fourteen days, it may be better to consolidate to one refrigerator and turn the other one off (leaving the door open) until several hours before it is needed. Likewise, if there are multiple heating or air conditioning zones in a building, energy can be saved by consolidating activities into the fewest

number of zones, leaving the unused zones on the set back temperature. The same idea applies to carpooling and trip linking: better to have two to four people in one vehicle, rather than one person in each of two to four vehicles. It is also better to do several errands in one trip to the same part of town, rather than making several trips.

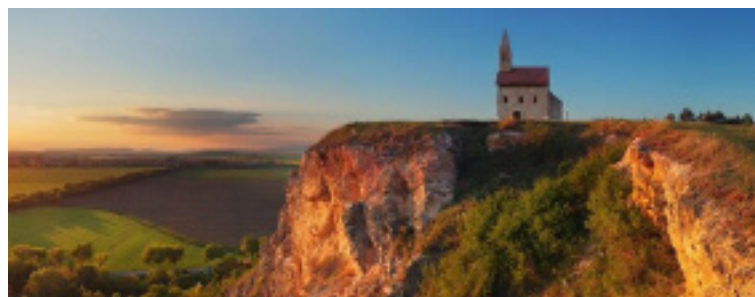
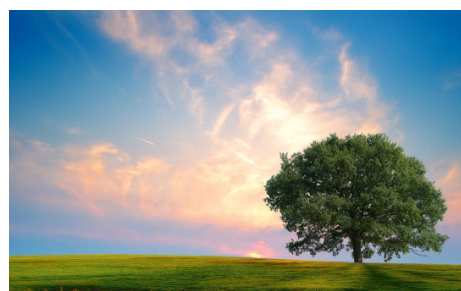
Inspect and Maintain. To keep building systems and vehicles operating with the intended efficiency, it is necessary to do routine maintenance such as cleaning or replacing filters.

A good building services manager can make a huge difference toward energy conservation simply by routinely and reliably seeing that things are turned off, temperatures are set back or programmed, systems are serviced regularly, and energy using spaces and devices are consolidated where possible. A cost-conscious building manager is an invaluable member on the parish Care for Creation Team.

For vehicles, regular service and maintenance of the working condition is necessary to maintain the vehicle’s fuel economy. Dirty filters, loss of oil lubrication, and low tire pressure all take a toll on vehicle fuel economy.

GREEN TRANSIT CHOICES

Walking, cycling, taking the bus, and carpooling **instead of driving a car** all reduce GHG emissions. Single occupancy in conventional vehicles should be the last choice.



... removing from the market products which are less energy efficient or more polluting,
 ... and encouraging the construction and repair of buildings aimed at reducing their energy consumption ...
 - Pope Francis, Laudato Si' ¶180

LOCK IN ENERGY SAVINGS STEP BY STEP

It can be a challenge to help conserve energy but there are low-cost devices—such as programmable thermostats and light and motion sensors—that can help with what might otherwise be inconvenient or unreliable. Inexpensive items, such as weather stripping and high efficiency light bulbs, can also be very cost effective. These simple items may pay for themselves in savings in a short time—sometimes less than a year. And once installed, they “lock in” the savings year after year.



Perhaps the best example of an affordable energy saving device is a **thermostat with seven-day programmable setbacks**. It can be difficult to get everyone to return the thermostat to the set back temperature upon exiting a building and many buildings, even small ones, could benefit from such a programmable thermostat. Because liturgies and many church activities occur at scheduled times, it is easy to program a thermostat to follow along. It is important for churches to use a seven-day program (not a five + two, and not five + one + one, which are also available) because the building use can change appreciably during the weekdays and on the weekend. Because of the Mass schedule, building use on Saturdays will be very different from building use on Sundays. Another advantage of programmable thermostats is that the system can be set to resume before people arrive, and no one needs to arrive early to turn on the heat or air conditioning.

volunteers with a little home repair experience. A small group of volunteers might weather strip the doors and windows of an entire church building in less than a day.

Lighting is essential for both function, aesthetics, and safety, indoors and out. In most instances, as light bulbs fail, energy savings are possible by replacing them with **modern high-efficiency light bulbs, without changing the light fixtures**. Older architectural lighting may have specialized lighting types. These may be difficult to convert to high-efficiency light bulbs. Your power utility or local environmental agency may have some advice in these instances so that you may reduce energy use and maintain the beauty of your church. Incandescent bulbs are inefficient, generating more energy in heat than in light, and can add to the demand for air conditioning. These have largely been replaced in the market by “Light Emitting Diode” or LED lights that fit exactly where the incandescent bulb was.

There is wide variation among buildings and climates, so it is not possible to give one set back schedule that will be ideal for all. Experience with thermostat programming will help parishes find the best combination of set backs and schedules that saves energy when the building is empty.

Fortunately, the cost of LED bulbs has come down considerably since the introduction of this technology. Moreover, LED lights outlast conventional lighting technologies. In addition to reducing the expense of energy bills, many parishes find that LED lighting provides safety benefits

because it reduces the frequency of staff having to climb ladders to replace spent lights in high overhead fixtures. Advances in LED lights are now allowing more options in brightness and color so that your parishioners won't notice any difference in illumination or beauty.

For overhead fluorescent tube lighting, replacement of the old "T12" tubes with the new "T8" tubes is well worth the cost of the new ballasts that may be required for the existing fixtures to accommodate the new tubes. Staff at local hardware stores should be able to give guidance as to what is needed and how to make the switch.

Motion and light sensors can be used to turn lights on when people are present or when it is dark and turn them off again when they are not needed. Some individual light fixtures, particularly exterior ones, have built-in sensors and do turn on automatically when detecting motion, providing both safety benefits and theft deterrence. Inside buildings, an electrician can wire motion sensors to control basic overhead lighting (though typically not individual "task" lighting) in common areas such as entries and hallways and in office and meeting rooms. If the lights go out when someone is sitting quietly, people quickly learn that a wave of the hand gets the lights back on again.

Investments have also been made ... in methods of construction and renovating buildings which improve their energy efficiency. But these good practices are still far from widespread.

- Pope Francis, Laudato Si' ¶126

INVESTING IN ENERGY SAVING TECHNOLOGIES

Once a parish has adopted free and low-cost energy savings and seen measurable results, it may be ready to make an investment for larger energy savings. A professional **building energy audit** is good way to identify opportunities for additional energy savings beyond the basics noted above. Some energy utilities and environmental

agencies will perform these audits free of charge. They may also help with implementing suggested actions.

Buildings, particularly older ones, typically have many opportunities to save energy by upgrading building systems. In order of cost, from low to high, these include upgrades to:

- larger light fixtures
- water heaters, such as on-demand systems, which may be the most efficient for church restrooms and Sunday hospitality because there is no hot water stored when no one is using it
- building insulation, including walls, ceilings, water heaters and hot water pipes
- heating, ventilation and air conditioning systems, including separation into zones with different occupancy schedules



It is not possible to predict, sight unseen, the extent of investment or potential savings for a building. Many factors, including the age of the building, its design and construction, the local weather, the hours of use, and the history of maintenance, will affect the potential for significant energy savings. It is best to seek professional advice for significant investments in building energy savings.

A reliable contractor can estimate both cost and savings for energy saving projects. These are often expressed in terms of the **payback period**, which is the time after which the energy cost savings exceed the cost of the energy saving project.

A payback period of seven years is reasonable. A payback period of three years or less is considered very good. Moreover, energy efficiency service providers (either private or those from your utility) are usually knowledgeable about financing options as well as available incentives, such as rebates. Contractors typically incorporate incentives into the calculation of the payback period and they may even fill out the incentive application on the customer's behalf.

One of the best opportunities to invest in energy savings is during construction of any kind of new facility.

Mindful of the tradition to orient the apse/sanctuary portion of a church building toward the East, the energy benefits of sunlight and shade should be among the considerations for orientation and placement of new parish buildings.

Retrofit or remodeling of an existing building is also an opportunity for energy savings. Use of existing buildings avoids production, transport, and waste building of materials. Furthermore, obtaining permits for significant remodeling often requires achieving new standards, including those for energy savings.

Choosing or replacing parish vehicles presents yet another opportunity to save energy and reduce emissions. Whether the vehicles are owned, leased, rented, or even borrowed, fuel economy should be a significant factor in the choice of vehicle. Choosing a smaller vehicle, when there are only one or two people, is one way to get better fuel economy. **All-electric vehicles** are another option, particularly if the electricity is sourced from on-site renewable energy. The gas and maintenance savings with such electric vehicles quickly add up and can make these an economical choice in many places.

Parishes may also wish to investigate the installation of electric vehicle charging stations for their own use or for that of their parishioners. Again, these can use electricity from the power grid or, better yet,

In some places, cooperatives are being developed to exploit renewable sources of energy which ensure local self-sufficiency and even the sale of surplus energy.

- Pope Francis, Laudato Si' ¶179

TRANSITION TO RENEWABLE ENERGY

In order to limit the global temperature rise below the threshold of 1.5 °C, the transition away from fossil fuels should be nearly complete worldwide by 2050. **Catholic parishes can lead by example by switching partly or fully to renewable energy as soon as possible before 2050.**

Renewable energy—solar, wind, geothermal, hydroelectric, and others—is the ultimate low-

carbon energy source. Renewable energy offers many other advantages, such as local jobs, a hedge against rising costs of conventional energy, potential independence from the grid (and grid interruptions), and a visible display of commitment to caring for creation as an element of the parish identity.

The use of renewables has been limited in part due

to historically higher costs relative to conventional energy. But that is changing because the cost of renewables has decreased substantially. Utilities worldwide are increasing their use of renewable energy and renewables are increasingly accessible to customers who generate their own electricity on site as well.

RENEWABLE ENERGY AT THE PARISH

Solar electric panels and solar water heating are common choices for renewable energy at Catholic parishes. Across the world, in developed and developing countries, solar panels are being installed on the roofs of Catholic parish churches, schools and other buildings, and in parking areas.

Often the biggest challenge to solar and other renewable energy at the parish is the **initial cost**. There are often a variety of local financing options to help meet this challenge, including loans, grants, and donor campaigns. In many countries and regions, governments provide incentives for installing renewable energy, though these are being phased out as the cost of renewables approaches that of conventional energy. Still, it is worth checking with your local power utility and state or regional energy office. A **reliable contractor** may often be

able to help identify current incentives and financing options, in addition to installing and maintaining the actual renewable energy systems.

Where available, **solar performance contracting** can be a good option for parishes because it allows someone else to build and maintain solar energy on the parish's rooftops. In such cases the parish often gains the benefits of tax incentives not applicable to untaxed charities. In this case, the parish pays only for the monthly energy that they use. For smaller parishes, this can also help relieve possible concerns about operating and maintaining unfamiliar equipment.



SOLAR POWER

ST. PETER'S PARISH

Bandra, Maharashtra India



courtesy of St. Peter Parish, India

In August 2015, St. Peter's parish began installation of 165 solar panels (52 kW total) on the church and terrace. They will supply power to the church, school, and other

parish buildings.

"St. Peter's Parish and St. Stanislaus High School have a reputation of being in the forefront of education for over a century and a half in Mumbai. The management felt the necessity of targeting a zero carbon endeavor to showcase to the students and society at large the necessity, economic viability and the responsibility of institutions to contribute to energy conservation," said Fr. Errol Fernandes, SJ, Parish Priest. "We hope that within the

next few months we will run all our needs largely by solar power."

While the initial cost is significant, the project is expected to pay for itself over time. "St. Peter's has worked out an economic funding strategy, involving donors, institution funding and financial banking loan to fund the project with a target of **breaking even within seven years** due to energy saving on electricity consumption from grid supply."

RENEWABLE ENERGY VIA THE GRID

We know that technology based on the use of highly polluting fossil fuels – especially coal, but also oil and, to a lesser degree, gas – needs to be progressively replaced without delay.

Pope Francis, Laudato Si' ¶165

In some regions and countries (Australia, Europe, and the USA), utilities offer **renewable electricity through the grid**. Account holders, whether they be individual parishes or entire dioceses (as in UK) can purchase up to 100% renewable electricity without installing anything on their own premises. Even when there is a cost premium to purchase such energy, the grid may be the quickest, easiest and most affordable means for a parish to choose renewable energy. Other advantages include predictable cost, "pay as you go" programs for the exact amount of energy needed, and ability to terminate the service at any time if a better option comes along. Moreover, retail renewable customers play a critical role in encouraging municipalities and utilities to shift to renewable power more quickly than they are required to do—"without delay" as Pope Francis said.

HOW IS OUR PARISH BILLED FOR ENERGY?

Traditionally, gas and electricity customers were billed by utilities for a monthly fee and a flat price per unit of energy used. The monthly fee represents the cost of having energy available to the customer, even if it none is used.

With the opening of electricity markets to competition in many parts of the world, and the advent of smart



"In October 2015, it was announced that La Seu Cathedral (commonly called "The Cathedral of Light") in Mallorca, Spain, would be illuminated by 100% renewable electricity purchased from an electricity service provider." Photo by Vagabond Quest

meter technology, many energy companies now use new pricing schemes.

The most common energy pricing schemes are "tiered" pricing and "time-of-use" pricing for electricity.

Tiered pricing means that there is a certain price per unit energy for the first block (or tier) of energy used per month, and higher prices for additional energy used in the higher tiers. There may be as many as four tiers with four different prices. In a tiered pricing scheme, the energy saved comes out of the highest price tier. Tiered pricing structures therefore reward customers whose usage remains in the lower or lowest tier.

In time-of-use pricing schemes, power used during the "peak" times is priced higher than power used at "off peak" times. The reason is that it costs more per unit energy for the energy provider to get the extra energy to meet everyone's peak demand. Time of use pricing schemes reward customers for shifting energy use to "off peak" hours.

Besides the new pricing schemes, **energy prices can change often**, e.g. seasonally or monthly, depending on the cost of fuel or energy purchased by the service provider. Energy prices may also include taxes, transmission charges, and other charges that can change over time.

Given a choice, electricity for church buildings may cost less in a tiered pricing scheme because most Masses and other activities take place during the day when the price is high in a time-of-use pricing scheme.

Modern energy providers want to keep customers happy. They also want to help cities and countries achieve their energy saving targets. **Do not hesitate to call the energy company and ask for advice on**

saving energy and saving money, and which of the available billing schemes is best for your parish facilities.

NET METERING

Net metering allows customers who generate their own power to send surplus energy to the grid, and make up deficits from the grid. The customer is only billed for the net difference between what they take

from the grid and what they provide to the grid. However, if the customer provides a net input to the grid during the billing period, the credit, if any, may be modest.

The rules regarding net metering for grid-connected customer power generation vary from place to place. Over time, changes in these rules tend to reduce potential barriers to customer-owned renewables.

"Purchasing is always a moral—
and not simply economic—act."⁷
- Pope Francis, Laudato Si' ¶206

BEYOND DIRECT ENERGY SAVINGS

The parish is directly responsible for emissions from its energy use in its buildings and vehicles. The parish can also influence the energy and emissions outside the parish through its planning and purchasing decisions and through its operations and waste minimization. Areas that are likely to provide measurable emissions reductions include:

- ✦ travel to and from parish activities by members of the congregation
- ✦ food, supplies, and goods purchased by the parish
- ✦ waste reduction, recycling, and composting
- ✦ sustainable gardening and grounds maintenance

TRAVEL TO AND FROM THE PARISH

Catholic parish churches are typically located in the community of the people they serve. In terms of transportation to and from the church, Catholic parishes have the advantage of being close. Even so, people have the same transit choices as clergy and parish staff of how to travel to and from church and parish activities. Parishioners can choose to walk, cycle, take public transit, catch a lift with a neighbor, or drive a personal vehicle to church. The



parish can help reduce energy used for travel to and from services and other parish events by:

- ✦ publicizing public transit routes on parish websites and Sunday bulletins
- ✦ installing bike racks in a good location
- ✦ scheduling some meetings immediately after services so as to reduce the number of trips
- ✦ holding some meetings by conference call or online, avoiding trips to and from the parish

GREEN PURCHASING

Green purchasing is another way that parishes can save money and reduce emissions outside the parish. The very first rule of green purchasing is to **buy only what is needed**. Consolidation of supplies also reduces unnecessary purchasing by eliminating unnecessary storage of paper, etc., in multiple locations.

When something is needed, the “green” choice is not only the smart choice, but often the lowest total cost option as well. Properly implemented, green purchasing saves materials and energy and reduces waste of both packaging and used goods. Green purchasing also contributes to the market demand for low-carbon products. In addition to energy efficient products mentioned earlier, common green purchase options include:

- ✦ environmentally friendly cleaning supplies
- ✦ refills for existing containers (rather than buying new containers every time)
- ✦ goods with recycled content, particularly paper, but also some furniture, flooring materials, etc.
- ✦ reusable, recyclable, or compostable items instead of disposable items
- ✦ all natural materials for art supplies
- ✦ locally produced food and goods, which avoids energy use for transportation

WASTE REDUCTION

Waste reduction is a natural complement to “green purchasing” because avoidance of future waste is a factor in decisions to purchase what we do need.

The green purchasing principle of buying only what you need also applies to product use. For example, print only what is needed, use color inks only when needed for clear communication, and use both sides of the paper—for example, print in-house documents and incoming faxes on the reverse side of previously printed paper. Electronic media are displacing a great deal of printing and parishes are making good use of websites and email rather than relying exclusively on printed communications. Distribution of calendars and directories is no longer necessary in many parts of the world.

Even when things can no longer be used, many can be recycled rather than going completely to waste. Where available, composting also reduces

waste and carbon emissions. Several Catholic parishes are doing their own composting, for example in Mumbai, Maharashtra (India). To get full benefits of purchasing reusable, recyclable, and compostable items, they must be reused, recycled and composted. Clear signage and labeling helps staff, parishioners and guests put things in the correct bins.

SUSTAINABLE GARDENING AND GROUNDS MAINTENANCE

Gardens and well-tended grounds add beauty to parish life, and plant growth takes up carbon dioxide from the air. Gardens should grow in harmony with the surrounding natural environment and avoid the introduction of invasive plant species or toxic materials. In drought-prone regions, parish gardens and grounds should be drought-tolerant. Drives and walkways should be swept rather than hosed with water.

Sustainable gardening and ground maintenance practices may incorporate:

- ✦ drought tolerant native plants
- ✦ permeable ground cover
- ✦ rainwater collection and drip irrigation
- ✦ planting trees to provide shade and/or let in the sunlight, reducing building energy demand for heating and air conditioning
- ✦ areas devoted to production of fresh fruit and vegetables for people
- ✦ natural alternatives to pesticides and chemical fertilizers
- ✦ habitat to support local species

Here are two parishes that have done just this: Cathédrale Notre Dame de Paris installed a bee hive on the roof of the sacristy for Brother Adam bees, known for their gentleness. St. Francis of Assisi Church in Triangle VA USA was designated as a Certified Wildlife Habitat by the National Wildlife Federation.

⁷ Laudato Si' quote is from Pope Benedict XVI, Encyclical Letter Caritas in Veritate (29 June 2009)

Our relationship with the environment can never be isolated from our relationship with others and with God.
- Pope Francis, *Laudato Si'* ¶119

INSPIRING PARISHIONERS



courtesy of St. Francis of Assisi Parish, Triangle USA

Parishes can engage their congregations in ecological citizenship by:

- ✦ celebrating creation through special liturgies, devotions, prayer services, and other activities and events
- ✦ educating members on the themes of *Laudato Si'*
- ✦ promoting lifestyle choices that are respectful of creation and compatible with a stable global climate
- ✦ working towards social and environmental justice in solidarity with the poor
- ✦ fostering personal conversion and holiness, especially through the virtues of temperance and prudence

The natural environment and climate change are topics of interest to many, particularly among young people. Engagement of these issues, if done well, can give parishioners a heightened sense of connection to the parish, to God's creation, and the global community. Thus such engagement can also become a profound means of evangelization and catechesis. Parishes that are making an effort on their own premises to reduce emissions through energy savings, waste reduction, green purchasing, etc., will be credible advocates when speaking to its members about what they can do at home and at work. Such parishes give witness to the care shown by the Church for the world.

PARISHIONERS' VIEWS ON CLIMATE CHANGE TODAY

Chances are that parish members have heard a great deal about climate change. Many are likely to accept its basis in fact and that people—especially the poor—are being harmed by it. They may have heard that there is a relationship between global climate change and their own lifestyle choices. Yet many of us may not yet have applied that thinking to our own consumption patterns. It is not necessarily

The notion that we must care for God's creation has inspired Catholics for millennia. From the accounts of creation in the Book of Genesis to the profound respect for nature signified by the Incarnation, as well as in the sacramental life of the Church—from the writings of the earliest Christians to the life of St. Francis of Assisi and to Catholic writers today, including the Bishops of Rome—the natural world inspires wonder, liturgy, prayer, chant, song, and art.

In *Laudato Si'*, Pope Francis reminds us of these realities. He also spoke of the urgent need to address the combined crises of environmental degradation and poverty. *Laudato Si'* is a call to reflection and action, to encourage or renew a care for our common home, to abandon the emptiness of throwaway cultures and consumerist lifestyles that are harming the Earth and its peoples, and to care for all of God's creatures, most particularly each other.

THE ROLE OF THE PARISHIONER

Laudato Si' creates an opportunity to start or continue conversations in our parishes and to prayerfully bring *Laudato Si'* to life through new and renewed projects and activities dedicated to respecting God's creation.

indifference or lack of information that prevents people from choosing low-carbon lifestyles. It may often be that attention and motivation are not sufficient to compensate for the lack of convenient and affordable low-carbon options, especially given the many demands of life. Yet today, both personal motivation and low-carbon options are on the rise in much of the world.

From the perspective of most parishioners, *Laudato Si'* inspires us to renew our care for God's creation, to re-examine lifestyle choices in light of our faith, and to feel a greater sense of urgency for environmental justice.

INSPIRING PARISHIONERS WITH LAUDATO SI'

OUR LADY OF EL CISNE PARISH Tena, Napo Ecuador



Photo courtesy of Our Lady of Cisne Parish

Father Victor Toapanta, Pastor of Our Lady of El Cisne in Tena, emphasized the study of the encyclical *Laudato Si'* in pastoral planning for 2015-2016. "Living the year of Mercy by being merciful towards nature, is something to be

encouraged in the entire Christian community. Catechists, catechized, and Catholic youth movements of the parish are studying the encyclical" said the Pastor.

The Pastor has also made some changes to the infrastructure of the parish, for example, electrical installations were upgraded to conserve energy and likewise the church lights remain off at night. Water use is controlled and monitored monthly to prevent water leakage.

In June 2015, after the catastrophic landslides in the Oyacachi area

(where the indigenous Kichwa people have lived for more than 500 years), the youth group and the Catholic charity Caritas Ecuador attended and cared for refugees, especially children. Parishioners were encouraged to help supply food to send to the victims of this natural disaster, and they continue to send food and economic resources to those families.

"To transform the lives of people living in the privileged places like the Amazon, an appreciation for the care of nature, rivers, trees and animals is necessary," said Fr. Toapanta.

Living our vocation to be protectors of God's handiwork is essential to a life of virtue; it is not an option or a secondary aspect of our Christian experience.
- Pope Francis, *Laudato Si'* ¶217

INSPIRING CARE FOR GOD'S CREATION

All the conventional means of inspiring and engaging parishioners are applicable to caring for God's creation: special liturgies and homilies; devotions such as Holy Hours and the Rosary; sound catechesis; music and artwork; bulletin and newsletter articles; discussion groups; special events, etc. There are ideas and sample texts available free online from many Catholic and other faith groups that can be adapted to a particular parish and its local context.

Here it should be noted that the title of *Laudato Si'* comes from the opening words of St. Francis' famous *Canticle of the Sun*. Thus rooted in the spirituality of St. Francis, the encyclical includes a universal prayer for our earth and an ecumenical one to rouse and unite Christians around a proper relationship with nature.

To help appreciate the spirituality of *Laudato Si'*, the following resources give some indication of the breadth and variety of resources that can be found online:

- Caring for God's Creation, Resources for Liturgy, Preaching and Taking Action, US Conference of Catholic Bishops (2015)
- Catholic Season of Creation, from the Columban Mission Institute (Australia), which includes detailed guidance, commentary and prayers for Sundays in September through to Feast of St. Francis of Assisi in October.



- Guided Rosary on Caring for Creation, from the Franciscan Action Network
- Stations of the Cross with John Paul II, On the Path of Ecological Conversion, also from the Franciscan Action Network
- PowerPoint reflection on *Laudato Si'* and the Climate Reflections, including short video clips from theologians discussing climate-related topics, from CAFOD
- Prayers of the Faithful, from the Franciscans for Ecology

Earth Day (April 22nd), World Environment Day (June 5th), and World Day of Prayer for Creation (September 1) are good occasions to incorporate environmental themes into liturgies and can counter an overly secular view of caring for God's creation. Lent and Advent are ideal times to promote sacrificial, climate friendly lifestyles. During Lent, the parish can suggest taking part in a "Carbon Fast." Parishes can celebrate a Season of Creation from September 1 to October 4th each year. In Advent the parish can discuss responsible gift giving and eliminating worldly excess from our Christmas celebrations.

Particularly during the Christmas "shopping season" parishes can help counteract market advertising that promotes excessive consumerism.

CARE FOR THE EARTH MINISTRY

MALATE CHURCH (OUR LADY OF REMEDIES)
Manila, Philippines



Photo courtesy of Malate Church, Philippines

Malate Parish, situated on Manila Bay, is one of the oldest churches in the Philippines (1588). Centrally located, it has witnessed all the major historical events in the Philippines. The most recent and notorious was the Battle for Manila in Feb. 1945. Over 100,000 people perished in the space of three weeks.

The parish is now mostly composed of urban poor with 16,000 residents and 16,000 coming to work and

school every day. Run by the Columban missionaries, it has a strong social justice orientation to which was added a similarly strong Care for the Earth component around 20 years ago.

The Care for the Earth Ministry started with an annual blessing of animals on the Sunday nearest to Oct 4, the feast of St. Francis. At this time the parish was promoting the New Cosmology or New Story of Creation as a framework for understanding and responding to the current ecological crisis. This led to the opening of the Jubilee Mission Exhibition which includes a telling of the New Story from a faith perspective. The parish was also involved in opening an environmental spirituality center called CELL (Center for Ecozoic Living and Learning), one hour away. Groups from the parish have regularly gone there and are part of the estimated 50,000 people who have visited the place. There is also a strong advocacy program against the plan to reclaim large portions (11,000 hectares) of Manila Bay.

Eventually a Care for the Earth ministry was established and for over 11 years has now liturgically celebrated Creation Time from Sept 1 to Oct 4. A wide range of programs have been developed: Earth Hour; a Lenten detox program, Cosmic Rosary and Ecological Stations of the Cross; Safe celebration of Christmas and New Year - an alternative to often harmful fire crackers; general education in greening and recently the installation of passive ventilation as well as 60 solar panels on the roof of the church.

The parish has always been encouraged by the Columban Missionary Society, the Archdiocese of Manila and the Catholic Bishops Conference of the Philippines. However with *Laudato Si'* and the arrival of GCCM, 'we have become' in the words of Fr. John Leydon, (former parish priest and now assigned as assistant, also a convener for GCCM Philippines) 'mainstream and cutting edge, and no longer regarded as quaint and exotic'.

ART EXHIBITION AND EDUCATION ON LAUDATO SI' AND LIFESTYLE CHOICES

CATHÉDRALE NOTRE DAME DE PARIS
Paris, France

Coinciding with the city of Paris' hosting of COP21 in November-December 2015, Cathédrale Notre Dame de Paris exhibited the work of Benedictine monk, Dom Robert (1907-1997), entitled "**L'ODE À LA CRÉATION.**" This work inspires contemplation of creation that is magnified, radiant and entirely

respected.

During this same time there were a series of lectures on *Laudato Si'* at several churches in the Archdiocese of Paris. The archdiocese's website also features a section called *Laudato Si' et moi* that provides quotes from the encyclical together with reflection and practical advice on food, consumption, transportation, homes, education, and professional and social life.

Music is another wonderful source of inspiration to care for God's creation. Many of the hymns

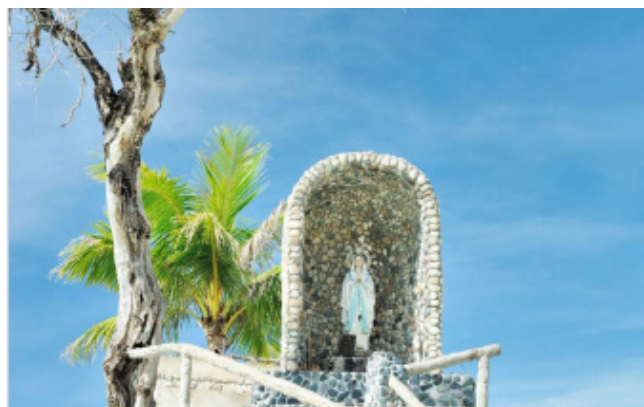


courtesy of Cathedrale Notre Dame de Paris

frequently sung in Catholic parishes echo the theme of experiencing God's love through the beauty of nature. Likewise, artwork can help keep nature present to us when indoors.

Today, in a word, "the issue of environmental degradation challenges us to examine our lifestyle."⁸
 - Pope Francis, Laudato Si' ¶206

INFORMAL EDUCATION ON CLIMATE-FRIENDLY LIFESTYLES



resources than a single parish where occupancy is governed largely by the number of Masses and meetings per week. Climate-friendly parishes have the leverage to influence the emissions of over a billion Catholics around the world—one out of every seven of the Earth's inhabitants today.

Parishioners, particularly students, have likely been exposed to a lot of information about green lifestyle choices. Most of it comes from a purely secular perspective. To add a Catholic perspective, many Catholic aid and development agencies have created resources to help people understand the connections among faith, care for creation, lifestyle choices, and environmental justice.

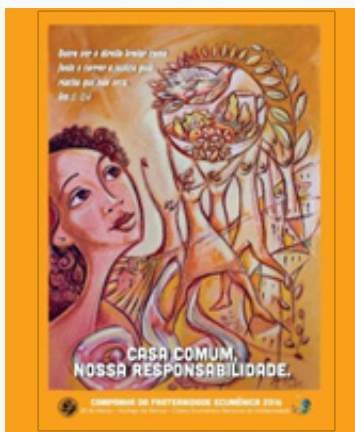
Catholic dioceses, such as the Archdiocese of Atlanta, GA in the USA, the Archdiocese of Ottawa, Canada, and the Diocese de São José dos Campos in São Paulo, Brasil, have also created resources for parishes to use with their congregations.

⁸ Laudato Si' quote is from Pope Benedict XVI, Message for 2010 World Day of Peace

Laudato Si' specifically calls on us to reconsider our lifestyles and their impacts on the Earth and on the poor. Fighting global climate change particularly depends on eliminating excessive consumption and the emissions associated with it.

The potential for greenhouse gas emissions reductions is even greater among parishioners than it is for the parish itself. Hundreds of families, with hundreds of homes and vehicles, consume far more

ENVIRONMENTAL EDUCATION RESOURCES DIOCESE DE SÃO JOSÉ DOS CAMPOS São Paulo, Brasil



courtesy of Diocese de Sao Dos Campos

The Diocese de São José dos Campos in São Paulo formed the Comissão Socioambiental and creates educational materials to help parishes teach responsibility for our common home.

As parishioners, we can reduce our environmental footprints by making better lifestyle choices. This includes saving energy at home, driving

automobiles less often, reducing the purchase of consumer goods, and choosing low-carbon options where possible.

WASTE AND CLIMATE CHANGE

Waste contributes to climate change because energy is used to produce, package, transport, store, collect and dispose of whatever is wasted.

Food waste is a problem in many parts of the world, and Laudato Si' specifically advises us to cook only what can reasonably be consumed. "Whenever food is thrown out it is as if it were stolen from the table of the poor."⁹

Recycling of paper, glass, aluminum, plastic, and other materials saves energy and reduces the net energy needed to produce and deliver those materials back to consumers. It also avoids taking up increasingly scarce space in landfills. A growing number of companies are also adopting "take back" practices so that consumers can return things like clothing and phones when they no longer want them.

Likewise composting allows organic material to be returned to the soil to nurture new growth, instead of going to landfills where they contribute to production of potent GHGs like methane. Leading cities have incorporated composting to their waste reduction programs.

⁹ Laudato Si' quote is from Catechesis (5 June 2013): Insegnamenti 1/1 (2013), 280.

Everything is connected. Concern for the environment thus needs to be joined by a sincere love for our fellow human beings, and an unwavering commitment to resolving the problems of society.

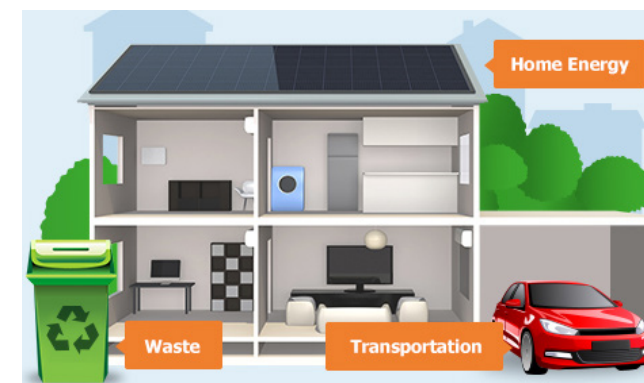
- Pope Francis, Laudato Si' ¶191

WHAT IS A "HOUSEHOLD CARBON FOOTPRINT?"

A household carbon footprint is the total amount of GHG emissions that can be attributed to the choices, actions, and lifestyles of the members of a household. In developed countries, a large part of the footprint comes from indirect sources, especially energy used to produce consumer goods and services.

A carbon footprint includes all GHGs, but is typically expressed in tons of carbon dioxide equivalent (CO₂e). GHGs such as methane and hydrofluorocarbon refrigerants have much greater warming potential than carbon dioxide.

Many environmental organizations offer free online calculators to help estimate household or individual carbon footprints. While the carbon content of any type of fossil fuel is about the same everywhere, the carbon content of electricity from the grid depends heavily on location. Therefore it is best to choose a local or national organization's carbon footprint calculator, such as the Household Carbon Footprint Calculator from the Environmental Protection Agency (EPA) in USA, or the Australia Greenhouse Calculator from EPA Victoria in Australia.



What's in a household carbon footprint? Household and personal carbon footprints are highly

individual and depend heavily on location, housing, transportation, and other personal habits and choices. Typical footprint components are:

- energy for home heating and cooling
- fuel consumed for personal transportation, particularly private cars and air travel
- electricity for appliances such as lights, refrigerators, clothes and hair dryers and computers
- emissions due to production, packaging, transportation and disposal of consumer goods used by the household

For consumers, use of consumer goods and services may account for as much as half of their carbon footprint. For people who travel by air, emissions from air travel typically dominate their household

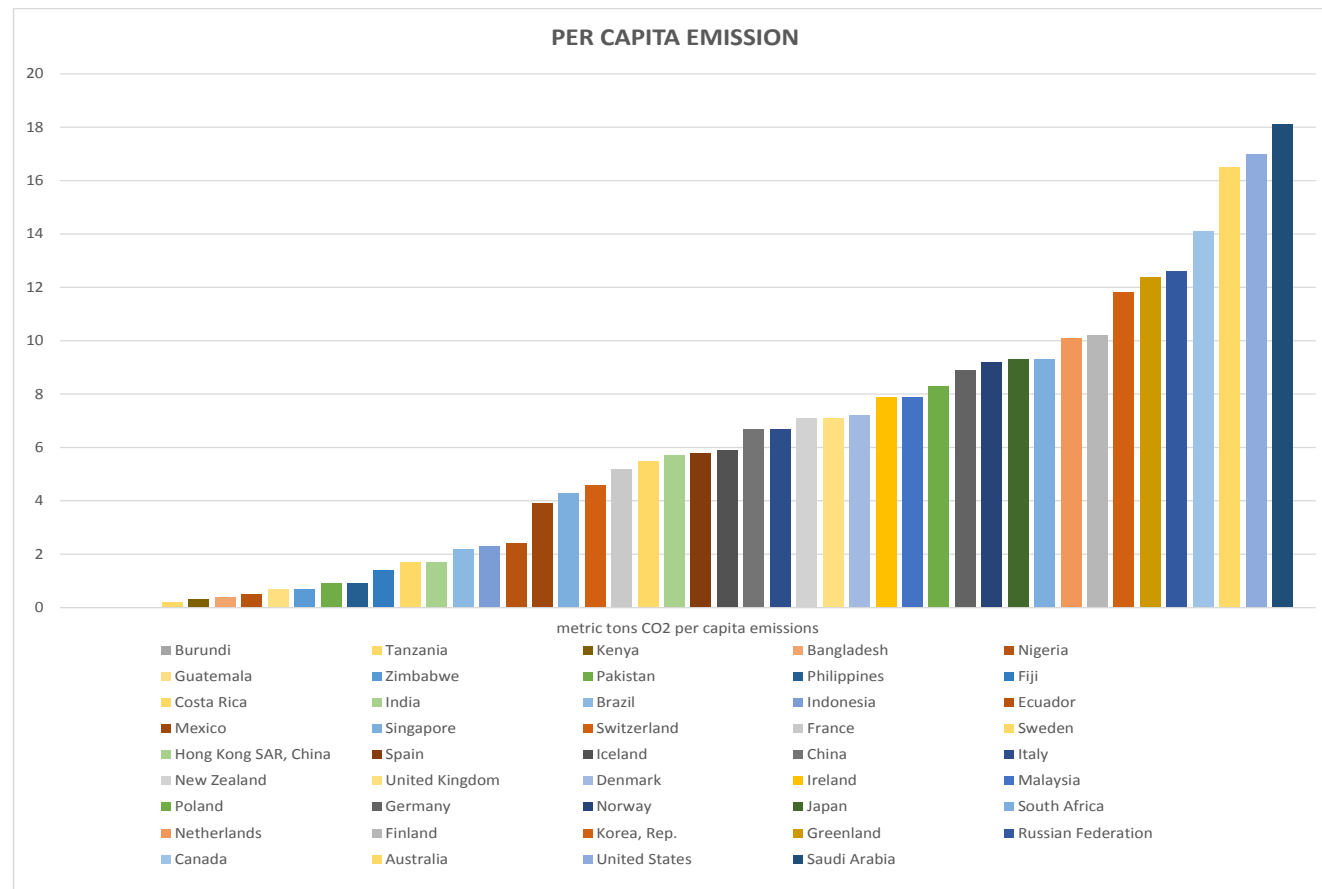
TOP 5 GHG EMISSION REDUCTION IDEAS FOR HOUSEHOLDERS

- 1. Dress for the weather and dial back the thermostat

- 2. Walk, cycle, ride public transit, or carpool instead of driving a car
- 3. Buy only energy efficient lights, devices and appliances, and turn them off when not in use
- 4. Eliminate waste by reusing, recycling, composting, and purchasing only what is needed
- 5. Forego unnecessary air travel

What should we aim for as carbon footprint? In an ideal world, each person would aim for a footprint of less than two metric tons per capita of CO₂e / year. For a household of four people, that would be less than eight metric tons of CO₂e per year. By 2050, if global average temperature rise is to be limited to 1.5 °C, the goal is virtually zero.

Many people will have a carbon footprint that is close to their national average. Emissions from domestic manufacturing contribute to average per capita emissions, though these are more correctly attributed to the portion of the population living consumerist lifestyles, rather than to those who live simply.



World Bank Data, CO₂ emissions (metric tons per capita), by country, 2011-2015

Education in environmental responsibility can encourage ways of acting which directly and significantly affect the world around us, such as avoiding the use of plastic and paper, reducing water consumption, separating refuse, cooking only what can reasonably be consumed, showing care for other living beings, using public transport or car-pooling, planting trees, turning off unnecessary lights, or any number of other practices.
- Pope Francis, Laudato Si' ¶1211

FORMAL EDUCATION



together with its national partners in fifty-nine countries, has excellent programs for schools. Eco-Schools is a fundamental initiative that encourages young people to engage in their environment by allowing them the opportunity to actively protect it. It starts in the classroom where it expands to the school and eventually fosters change in the community at large. Through his program, young people experience a sense of achievement at being able to have a say in the environmental management policies of their schools, ultimately steering them towards certification and the prestige which comes with being awarded the honor of a Green Flag.

There are more than 95,000 Catholic primary and elementary schools and over 43,000 Catholic secondary and high schools worldwide. These institutions serve over fifty million students. Many of these schools, particularly the primary and elementary schools, are associated with parishes.

It is equally helpful to include the theme of respect for the earth and its climate in faith formation classes whenever discussing contemporary issues. There are many resources available for lesson plans, presentations, and discussion groups (see the Recommended Resources section at the end of this Guide). These are written in ordinary language and do not need special expertise to deliver.

Fortunately, care for the environment has become a standard theme in many schools—in secular schools, as a social responsibility, and in religious schools, as a divinely taught moral obligation.

In many countries children receive some form of instruction on environment in their regular schooling, and may well be recycling and saving energy there. Faith formation classes for children should therefore emphasize that caring for creation is a moral mandate, and the theological reasons for this mandate. It should help children connect their care for creation to the liturgy, for example, through sound catechesis, prayer, song, and artwork. A child's understanding and commitment to care for God's creation can be a wonderful source of inspiration to adults, causing them to think about the state of the world to be inherited by future generations.

School age children are often aware of global climate change as an issue, and climate science is appropriate for children at about age twelve and older. Even for younger children, estimating their personal or household carbon footprints can be a useful exercise. It helps promote care for creation, it tests mathematical skills, and it develops an appreciation for the life lesson that there are consequences for our actions in demonstrating the relationship between causes and effects of environmental degradation and climate change.

The Foundation for Environmental Education,

For adult education, there are many resources on teaching care for creation through study of *Laudato Si'*, such as the study guide from the Columban Center for Advocacy and Outreach, or the short video from the Jesuit Ministry, America Media. Whether as a special event or series, or at a regular class for those participating in the Rite of Christian Initiation of Adults, it is well worth devoting a significant block of time to study and discussion of *Laudato Si'*. It is, indeed, what the Holy Father has asked of us.

Moreover, study and discussion of *Laudato Si'* can be complimented with practical information on putting it into practice. Energy utility companies and local governments or universities can often provide a guest expert speaker, at no cost, to events that serve the public. If asked, this speaker can focus on practical ideas for saving energy at home. The local viewpoint is important because the use of energy depends a great deal on the local climate, housing stock, transportation infrastructure and culture. Energy conservation can become a part of the culture—as natural as other things we do.

ENVIRONMENTAL EDUCATION FOR YOUTH

CATHOLIC YOUTH NETWORK FOR ENVIRONMENTAL SUSTAINABILITY IN AFRICA (CYNESA)

Nairobi, Kenya, and other African countries



Photo courtesy of CYNESA

CYNESA activities are tailored into three main areas: education and awareness creation, networking and advocacy training, encouraging and supporting concrete action plans at the local level in schools, parishes and communities

CYNESA works with schools such as St. Peter Claver High School, a Jesuit school in the Tanzanian capital, Dodoma, and Lycee Saint-Esprit (Holy Spirit High School), a Jesuit school in Bujumbura, Burundi.

CYNESA conducted workshops on the environment and climate change for the school's environment clubs.

CYNESA is developing a Climate Change Toolkit for use in schools and plans to launch it at the CYNESA Summit meeting in May 2016. CYNESA was established in 2012

by young Catholics from Kenya, Ethiopia, Zimbabwe, Tanzania, Zambia, Rwanda and South Africa, drawn from and representing university chaplaincies and parish groups.

CYNESA members use social media and blogs to update each other and to give encouragement across the many African countries where Catholic youth have joined the network.



Photo courtesy of CYNESA

ENVIRONMENTAL EDUCATION AND COMMUNITY ENGAGEMENT

REGINA MUNDI CHURCH, Moroka, Soweto, Johannesburg, South Africa



Photo courtesy of AD News, Archdiocese of Johannesburg

The Justice and Peace Ministry of Regina Mundi Church in South Africa, together with a number of civic and environmental organizations, organized a 4-day environmental

community workshop at Regina Mundi Church. The workshop began with a two-day door-to-door campaign inviting residents to attend the workshop.

Regina Mundi Parish Priest, Fr. Reginald Anthony, OMI, opened the workshop with a prayer. The workshop aimed to educate the community on the environment, address environmental concerns, and come up with solutions to better care for the environment with the theme "Keep Soweto Ever Green and Clean."

A Ward 33 clean-up campaign took place on the last day by stakeholders and community members who cleaned streets and open spaces in the area.

This story and photo were published by Lerato Mohone in ADNews (Volume 30, No 8), a publication of the Diocese of Johannesburg, South Africa, in December 2015. Regina Mundi is the largest Catholic Church in South Africa. In 1997, then President Nelson Mandela designated November 30 as Regina Mundi Day in recognition of its important role as a meeting place for the people of Soweto during the anti-apartheid struggle.

As the Bishops of Southern Africa have stated:
 "Everyone's talents and involvement are needed to redress the damage caused by human abuse of God's creation." [22]¹⁰
 - Pope Francis, *Laudato Si'* ¶114

ENGAGING PARISHIONERS WITH ACTIONS

Once the parish education and conversation about climate change begins, it is important to give parishioners a chance to participate, even in a small way, in actions to help stabilize the climate. Taking action helps people to go from concept to the concrete. It gives people a chance to experience the interconnections of our lives, our planet, and the human family—all in relation to God.



- as supplies for parish art projects
- Aligning parish activities with the seasonal growing cycle can help inspire appreciation for the goodness and order of creation.

A Care for Creation Team could organize a series of seasonal activities such as:

- spring seed giveaway and gardening demonstration
- summer "gardener's market" where parishioners sell or give away produce from home and parish gardens
- autumn harvest thanksgiving Mass, followed by a meal that includes home grown and home made food

People can experience their concerns in a positive way: "I am concerned about climate change and I can do something about climate change." Even something as simple as recycling and switching to compostable tableware during parish hospitality events can help people to internalize the reason for these actions. It becomes the "new" normal. And a parish setting can help individual efforts become communal ones.

In addition to raising awareness about climate change, parish Care for Creation Teams are especially good at finding ways to engage parishioners directly in climate-friendly activities. In line with parish green purchasing and waste reduction practices, parish teams may emphasize things that parishioners see and use at parish functions, such as:

- parish hospitality menus that include fresh local produce
- recyclable, compostable or reusable tableware, with student "bin monitors" to assist parishioners in using the correct bin at parish functions
- seasonal flowering plants for church decorations, which are then given away towards the end of the season
- natural, recycled, or even clean waste materials

Several Catholic parishes in the San Francisco peninsula host farmers' markets to sell produce grown at St. Patrick's Seminary and University in Menlo Park, CA, by a Catholic workers' cooperative called Nanofarms USA. The cooperative provides skills and employment to low income workers struggling to afford housing costs in the area.

Care for Creation Teams often bring **existing energy and climate programs** to the parish, such as technology demonstrations or free giveaways of high efficiency light bulbs or low flow showerheads. A "Dress for the Weather" campaign can complement parish adoption of community guidelines for indoor temperature settings to save energy in both heating and cooling seasons. Parishioners can be engaged directly in parish energy savings efforts through volunteer days for weather stripping or replacement of inefficient light bulbs. One of the most popular climate-friendly parish activities is "Walk to Church Sunday."

¹⁰ "Laudato Si'" quote is from Southern African Catholic Bishops Conference, Pastoral Statement on the Environmental Crisis (5 September 1999)

ENGAGING PARISHIONERS IN LIVING SIMPLY

ST. JOHN BOSCO PARISH
Woodley, Reading Pastoral Area, Berkshire UK



Photo courtesy of St. John Bosco Parish

The Live Simply Group was formed in order to foster the idea of caring for the Earth within the community of St. John Bosco Church. Members

of the community join a range of parish activities, including Walk to Church Sunday, annual community litter-pick, creation walk, and annual creation care Mass with harvest offering in September. They have also joined national campaigns such as CAFOD's One Climate, One World.

Many also made personal pledges for changes in lifestyle. "To reconsider what in our lives is a necessity, and what is simply desirable, is very difficult, particularly for those who live in developed countries" said Miss Rita Belletty, one of the Group's

original founders. "It all begins with prayer," she said.

In 2012, after four year's work, St. John Bosco became the first parish to receive the livesimply award, a national prize awarded by CAFOD to recognize the ways a parish can make a difference in its community and the world with a commitment to live more simply and sustainably and to stand in solidarity with the world's poor. CAFOD is the official aid agency of the Catholic Church in England and Wales.

CARE FOR CREATION MINISTRY AND SOCIAL MEDIA

CHURCH OF THE NATIVITY OF THE BLESSED VIRGIN MARY
Singapore



Photo courtesy of the Church of the Nativity of the Blessed Virgin Mary

The ministry known as Care for Creation (C4C) uses social media (Facebook) to share news and to promote its projects among its many Facebook followers. Their "about" page explains their intention to plant seeds for the care of our "common home" in response to the Laudato Si' encyclical. C4C, an initiative of Fr Henry Siew, Parish Priest, began in September

2015, shortly after the encyclical was published. They promote stewardship of God's creation by addressing excessive consumerism and the impact of climate change on the vulnerable poor.

In January 2016, C4C took advantage of a traditional practice for the preparations of Chinese New Year (also known as Lunar New Year). It is customary for families to prepare for the Chinese New Year celebrations by spring cleaning their homes, discarding items which they no longer like, and replacing such items with new ones. Parishioners were invited to "turn trash to treasure" by bringing their used clothes, bags, books, toys and shoes to the church. These items were sent to poor communities in rural Myanmar and Philippines. The objective of this project was to educate parishioners on the problem of excessive consumerism. By donating items which are still in good and usable condition,

parishioners could help the needy, and at the same time reduce waste of goods, and the energy and resources used to produce and deliver them. To reach out to the youth and young families within the parish, the ministry publicized the project on their Facebook page. The response for this project was overwhelming, and parishioners of all ages, generously came forward to donate their pre-loved items, to help the poor communities.

While packing and sorting through the donated items, C4C ministry members observed that a significant proportion of the items were new, or barely used, indicating the need to further educate parishioners on the impact of excessive consumerism on the environment. The ministry plans to continue to use social media to engage and educate parishioners on creation spirituality and the mission of stewardship of creation.

ADVOCACY AND SOLIDARITY

... everything is interconnected... genuine care for our own lives and our relationships with nature is inseparable from fraternity, justice and faithfulness to others.
- Pope Francis, Laudato Si' ¶170



behavior of the current generation and conditions for future ones.

Excessive consumption patterns among the few are impacting the lives of many who consume little. Such over consumption threatens the futures of those who have yet to be born.

CLIMATE CHANGE AND ENVIRONMENTAL JUSTICE

Climate change is a cumulative effect of unsustainable fossil fueled consumption in industrialized nations and wealthier sectors of society. While climate change affects everyone, the negative impacts of climate change are being felt first and worst among the poor: those who are marginalized and excluded from the benefits of development. A fundamental injustice arises from the fact those who suffer most from climate change have contributed least to the problem. The injustice is likewise intergenerational: future generations have contributed nothing to the global problem they will inherit.

Developing countries are highly exposed to risk from climate change for many reasons, including vulnerable infrastructures and scarcity of resources. Even within the borders of any one country, the poor and socially excluded are disproportionately at risk because of:

- higher reliance on climate, affected livelihoods, particularly agriculture,
- greater vulnerability of housing and nutrition to severe weather events,
- lower access to health care, technology, financial, and even information resources,
- fewer options for relocating or finding alternate employment,
- lower likelihood of being included in decision-

Laudato Si' reminds us that everything is interconnected. We are part of the natural world, continuously interacting with it and having our life nurtured through it. We depend on it for our own existence. In harming the natural world through environmental degradation we are indirectly harming ourselves and all human life.

Laudato Si' proposes an integral ecology, one that respects the human and social dimensions, and which is inseparable from the notion of the common good. In the words of Pope Francis, the principle of the common good is a summons to solidarity that "demands before all else an appreciation of the immense dignity of the poor in the light of our deepest convictions as believers." (LS 158)

Pope Francis asks us to hear both the cry of the earth and the cry of the poor. Compassion arises naturally for those with whom we feel special connections, such as our neighbors and our communities, or people whose cultural heritage we share halfway around the world. *Laudato Si'* calls us to a new and universal solidarity, one that embraces everyone—and that extends to future generations.

The problems of climate change clearly demonstrate the global connections between human behavior and environmental health, and between the

making processes for mitigation, resilience building, adaptation, emergency response and/or recovery

Laudato Si' calls on people to insist that governments take stronger measures to prevent environmental harm. Many have responded to this challenge.

But we must also recognize that the global climate is already changing and that the global need for emergency response to natural disasters is growing. While it is impossible to determine the extent to which any natural disaster is exacerbated

by climate change, the increasing frequency of record-breaking events such as storms, floods, heat waves, and droughts suggests that the impacts of climate change are being felt today.

Moreover, some low-lying and island communities are severely threatened by long term sea level rise that is directly attributable to global climate change. The need to build resilience against future climate change is also great.

SOLIDARITY IN SUSTAINABLE DEVELOPMENT

**HOLY FAMILY PARISH,
Emerton, NSW Australia**

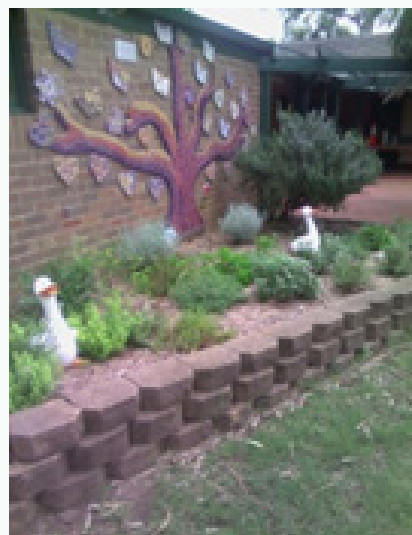


Photo courtesy of Holy Family Parish

Holy Family parish serves about 300 families, including many Darug people, the traditional custodians of land on which the church was built. Nutrition is an issue for many in the area and Holy Family is a significant provider of affordable food, and free milk, bread and fresh vegetables.

Holy Family, in a poor outer suburban area near the Blue Mountains, is the twin parish of Our Lady of the Way, in a prosperous urban area of North Sydney. Together they are caring for creation. Fundraising at Our Lady of the Way has enabled Holy Family to install solar panels on the roof of

the food store facility, and to plant vegetable gardens to supplement local diets. The gardens will also help people see our connections to creation and its seasons. In addition to serving the local needs, these projects help avoid emissions from conventional electricity, and from over-reliance on "fast food" and food transported over long distances.

The Holy Family choirs (of which there are four) travel to perform at Our Lady of the Way, and Holy Family parish hosts annual visits from Our Lady of the Way. About the twin parishes, Holy Family Parish Priest Fr. Gregory Jacobs, SJ, said, "It is very much a two-way relationship. They get a new lease on life over there, and we get a new lease on life over here."

Society, through non-governmental organizations and intermediate groups, must put pressure on governments to develop more rigorous regulations, procedures and controls.

- Pope Francis, *Laudato Si'* ¶179

FAITH-BASED ADVOCACY

Catholic advocacy on global climate change is based on faith in dialogue with reason. This uniquely informs us that creation is a gift from God intended to benefit all. Yet as Pope Francis tells us in *Laudato Si'*, "the Church does not presume to settle scientific questions or to replace politics."



that are already occurring obligation to include the issue of justice in the environmental debate

GCCM and its 285 partner organizations are united by our Catholic faith and by the moral imperative of responding to and raising awareness about climate change. Founded in 2015, GCCM helped organize prayers, pilgrimages, and civic marches. To date it has collected signatures of over 900,000 Catholics worldwide who signed the GCCM petition, which asked world leaders "to drastically cut carbon emissions to keep global temperature rise below the dangerous 1.5 °C threshold and to aid the world's poorest in coping with climate change impacts."

At COP21 in Paris, the GCCM presented these signatures to representatives of those very leaders.



French President François Hollande receives the GCCM Catholic Climate Petition with over 900,000 signatures along with other interfaith petitions on December 10, 2015. Photo credit: Sean Hawkey/WCC.

Religious leaders from many faiths made their voices heard at COP21. For example, OurVoices delivered hundreds of thousands of signatures

By this he means that rather than insisting on specific political or economic norms, the Church urges that any outcome of a particular worldly endeavor serves the neediest and builds up the common good. While opinions on approaches may differ, necessary outcomes such as keeping global temperature rise below the threshold of 1.5 °C and caring for those harmed by climate change garner broad support among many of the faithful who are most engaged with such issues, as well as many others who are not Catholics.

ADVOCATING STRONG INTERNATIONAL CLIMATE POLICY

Laudato Si' calls for public pressure to bring about decisive political action by embracing these concepts:

- urgent need for drastic reduction in emissions
- need for enforceable international agreements greater responsibilities of high-emitting industrialized nations to provide solutions to the problems they have caused
- need for assistance in adapting to changes in climate

on its petition urging global leaders at COP21 to prevent devastating climate change. Our Voices interfaith climate change campaign operates under the umbrella organization GreenFaith to mobilize and lift up the desire for action from the world's people of faith through social media, advocacy, and partnership engagement.

Inclusion of the goal of limiting global temperature rise to 1.5 °C in the Paris Agreement was considered a major achievement by GCCM petition signatories and many others who had supported this goal.

NATIONAL AND LOCAL ADVOCACY 2016-2020

Laudato Si' acknowledged the need for greater attention to policy at the national and local levels as well. While we would all be served by strong international agreement on climate change, the hard work will be done nationally and locally.

The Paris Agreement will only be a success if countries that pledged to reduce their emissions honour their intended Nationally Determined Contributions (INDCs) and improve significantly on

them in the years to come. The combined effect of all the participating countries' INDCs would only limit global temperature rise to 2.7 °C. The actions of individual governments will be critical in determining whether the world moves forward to limit global average temperature rise to 1.5 °C.

GCCM encourages parish groups to work with local and national partners to support action against global climate change. Catholics can join local efforts, such as calling on city mayors for full de-carbonization by 2050, as well as national campaigns advocating for more ambitious targets than the INDC pledged at COP21. In industrialized countries, there is a need for additional low-carbon financing, while in developing countries more resources are needed for adaptation.

Many parts of the world are already being served by Catholic organizations engaged in national advocacy on global climate change, including CAFOD in England and Wales, Caritas Australia and Catholic Climate Covenant in the USA.

For historical reasons, Catholic activities related to the environment and climate change may be listed under the heading of "justice and peace."

HOW IS CLIMATE CHANGE AFFECTING PEOPLE IN CATHOLIC PARISHES AND DIOCESES?

Manila, Philippines: "Typhoon Haiyan (locally known as Yolanda) in November 2013 was one of the worst tropical cyclones ever recorded. Winds and flooding claimed over 6,000 lives." – Fr. John Leydon, MSSC

Stockton CA USA: "...the Diocese of Stockton ... includes portions of the Sierra Nevada, the Mother Lode and the San Joaquin Valley. Each of these

regions is facing unprecedented ecological challenges with drought, risk of wildfire, and dangerously poor air quality. We know that it is especially the poorest and most vulnerable of residents who are suffering from these realities." – Bishop Stephen Blaire

Emerton, NSW Australia: "Most of Sydney and most of Australia is affected by drought. Some of the

cycles of weather have changed. Thunderstorms and rain are more severe. Extremes of drought and flood in Sydney have become an issue." – Fr. Gregory Jacobs, SJ

Mumbai, India: "Climate change has and will effect everyone as air pollution with increased carbon dioxide levels will have negative impact on the health of all citizens." – Fr. Errol Fernandes, SJ

AIR POLLUTION AND CLIMATE CHANGE.

Scientists note that climate change tends to worsen air pollution. Warmer temperatures tend to increase formation of ozone, which is necessary at the highest levels of the atmosphere but a pollutant for humans down below where we

breathe. In drought conditions, dust contributes to particulate matter in the air. Both ozone and particulates are known to have adverse effects on health. Many regions have adopted strict controls on emissions of pollutants into the air, and many

are making improvements in air quality despite global warming trends. Yet much of the air pollution experienced worldwide today is due to burning of fossil fuels that contribute to climate change.

EMERGENCY RESPONSE AND RECOVERY FROM NATURAL DISASTERS

The needs of those suffering from the impacts of climate change can be immediate. During record-breaking storms and floods, there are people who are in danger and need of rescue, people who have lost loved ones, people who are injured or sick, people who have lost everything they own, people who find themselves without homes or livelihoods. They are our brothers and sisters, sometimes literally so. Yeb Saño, the climate negotiator from the Philippines whose impassioned plea received a standing ovation at COP20, made that plea at a time when his brother had been without food for days in the wake of Typhoon Haiyan.

Today's news and social media have made it easier to witness natural disasters even as they unfold elsewhere in the world. There is a natural human tendency to want to help. Yet even then it is often too late. Timely relief depends on preparedness with stocks of emergency supplies, volunteers and staff who can leap into action, and a chain of responsibility and accountability that will ensure

the aid goes properly to the needy. Thus ongoing support for aid, relief, and Catholic development agencies is critical.

Sometimes parishes are called on directly to come to the aid of disaster victims. In areas around St. Louis, MO, Sacred Heart Parish and St. Bridget of Kildare Parish did just this during record flooding in December 2015. More often, we seek to help others who are far away. There are many actions a parish can take to help those suffering from natural disasters. Some include:

- guest homilist or speaker from a Catholic relief agency, or from a region where disasters hit
- special collections or ongoing parish fund specifically devoted to a particular crisis
- ongoing support for local relief efforts, with contribution of materials, supplies, and funds
- volunteer opportunities to serve those in need, including recently arrived refugees from disaster areas

Warming ... creates a vicious circle ... affecting the availability of essential resources like drinking water, energy and agricultural production in warmer regions ...
... If present trends continue, this century may well witness extraordinary climate change and an unprecedented destruction of ecosystems, with serious consequences for all of us.

- Pope Francis, Laudato Si' ¶124

SOLIDARITY WITH VICTIMS OF CLIMATE CHANGE

Catholic aid organizations like CAFOD, Caritas, Catholic Relief Services, and Canadian Catholic Organization for Development and Peace are on the ground today, helping people in need. They are present at times of environmental crisis and during the long process of recovery. They also work with at-risk communities on adaptation resilience-building. These organizations are deserving of ongoing support from Catholic parishes worldwide.

RESCUE AND AID FOR FLOODING VICTIMS CARITAS MYANMAR AND LOCAL PARISHES



Photo courtesy of Fr. Bosco Saw, CBCM

During July and August 2015, torrential monsoon rains caused

widespread flooding in Myanmar. The crisis claimed the lives of more than 100 people and affected the homes and livelihoods of a million people. It was the country's worst natural disaster since 2008.

Among those most severely affected were the people of the Hakha and Kalay dioceses in the Chin territory, which is home to a large concentration of tribal ethnic groups.

The Catholic charity Karuna Karitas Social Solidarity (Caritas Myanmar),

local parishes, and the Sisters of the Good Shepherd responded with assistance. Catholic centers in Kalay received many people who were affected by the rising waters.

"People have been evacuated to safer zones, and many are accommodated in parish camps," said Fr. Bosco Saw, Head of the Biblical Commission of the Catholic Bishops' Conference of Myanmar.

This news was reported by Antonio Gonsalves of the Catholic News Agency in August 2015

Emergency food, water and medicine, help people survive a crisis. In the wake of environmental crisis, after the news coverage has died down, those affected embark on the long hard journey of recovery. The cost of recovery typically far exceeds the cost

of immediate survival, yet the world begins to lose interest in the victims who are no longer at death's door. The victims of crisis often need assistance over an extended period.

RESPONDING TO CRISIS IN COUNTRY OF ORIGIN ST. JOSEPH THE WORKER PARISH Thornhill, Ontario, Canada

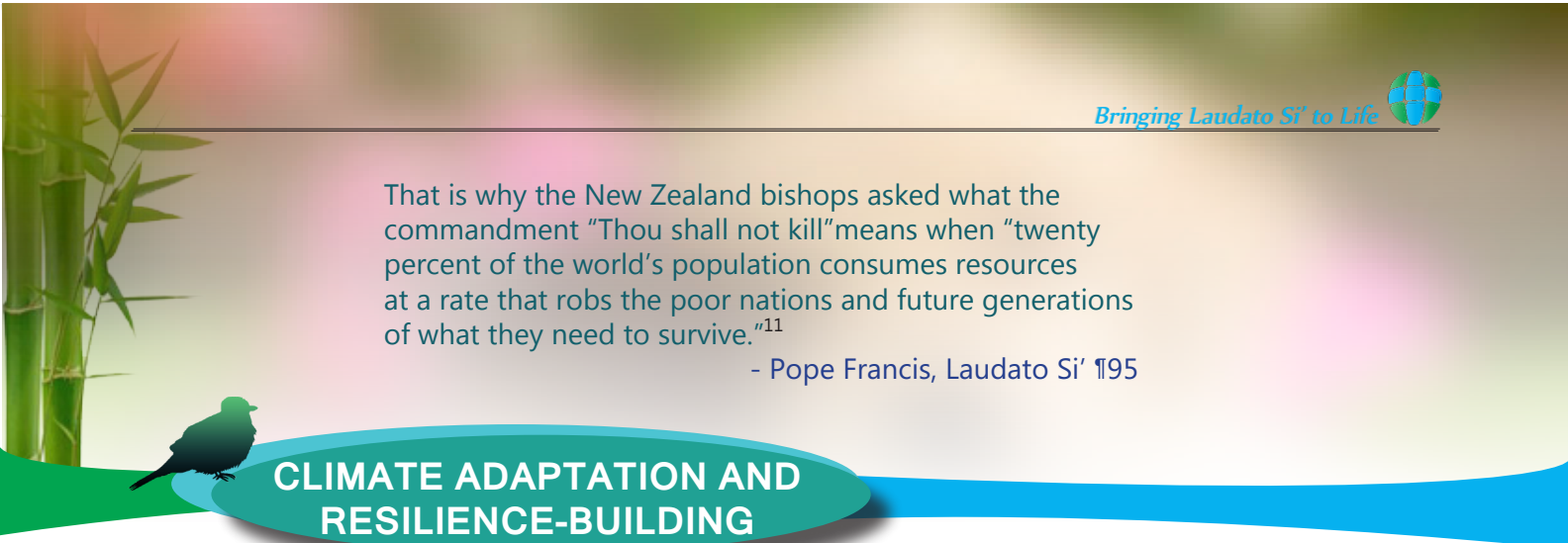


Photo courtesy of St. Joseph the Worker Parish, Canada

In 2013, when St. Joseph's Eucharistic Apostles of the Divine Mercy (EADM) prayer group members learned of the disaster caused by Typhoon Haiyan (locally known as Typhoon Yolanda) in the Philippines, they responded with compassion. Many of the EADM members are of Filipino origin.

They understood the widespread impact of the deadliest typhoon in Philippines history, as well as the need for extending assistance far beyond the devastated Tacloban area of Leyte Province. EADM members collected 300 boxes of donations and shipped them to the Diocese of San Carlos, on Negros Island. A parishioner and a chaplain from a Catholic health care center in Toronto flew to the Philippines and helped to distribute the boxes to the needy. The Bishop of San Carlos remembered their generosity. When he visited Toronto for the ShareLife annual missionary appeal nearly two years later, he thanked the donors personally.

This story was reported by Jean Ko Din in The Catholic Register of Toronto, Canada on August 25, 2015



That is why the New Zealand bishops asked what the commandment "Thou shall not kill" means when "twenty percent of the world's population consumes resources at a rate that robs the poor nations and future generations of what they need to survive."¹¹

- Pope Francis, Laudato Si' ¶195

CLIMATE ADAPTATION AND RESILIENCE-BUILDING

In some places, climate change is a threat that has not yet reached the scale of widespread disaster. Global warming and sea level rise pose risks to lives, livelihoods, and ways of life, often in subtle ways, particularly in low lying areas where sea water incursion is affecting the availability of fresh water and the productivity of the land. Sea water incursions and extreme weather events can produce "smaller" crises that strain a communities' ability to recover. Residents of such communities face a choice: either build up defenses and adapt or abandon traditional lands altogether.

Building resilience is a strategy to deploy in advance of, and hopefully instead of, emergency response. Educating communities, strengthening or elevating housing, planting native and climate-resilient

trees and crops, building sea walls, establishing emergency communication networks, training volunteers, setting up advance warning systems, predicting the onset of the rainy season—these are just a sample of the approaches that might help prevent communities from being rendered non-viable by climate change.

Strengthening the climate-change readiness of a community is an investment that can avoid greater costs of surviving and recovering from a future disaster and prevent loss of life and culture from which there can be no recovery. Catholic aid and development agencies are helping people to preserve cultural heritage and traditional ways of life through adaptation and resilience-building.

¹¹ Laudato Si' quote is from New Zealand Catholic Bishops Conference, Statement on Environmental Issues (1 September 2006)

BUILDING CLIMATE RESILIENCE CATHOLIC AID AGENCIES WORKING IN FIJI



Photo courtesy of Caritas Australia

Caritas Australia takes the asset based approach to community development, based on the principle that everyone has inherent God-given dignity and worth. And every member of a community has the right and capacity to participate in building their community's future. This approach encourages communities to identify their assets and strengths—including the natural resources, cultural knowledge, abilities and existing organizations and relationships—from which they can build.

One example is their work with partner People's Community Network and the Fijian island people of Nukui. It is a beautiful, wild place where its people have

lived for many generations, relying on the sea for spirituality, food and transport. As the storms and cyclones in the Pacific intensify, the tide is marching steadily closer. The last few cyclone seasons have seen the waves washing over the top of the sea wall and into the community. Nukui is being inundated with more and more sea water, eating away at the beach. The homes and gardens closest to the ocean are being flooded, and the soils are turning salty so that people can't grow their own fruit and vegetables—so vital in such a remote community.

Caritas Australia's partner organization, People's Community Network, is working with the Nukui community to extend the sea

wall and strengthen emergency preparedness in this cyclone- and tsunami-vulnerable community. Through participation in workshops that help communities prepare for disasters and reduce their risks, Nukui's disaster committee has been able to expand its activities. Evacuation plans are now in place, focusing on the less mobile, children, and the elderly. Work is planned with the Fiji Government to build a school on a reinforced, raised platform that can withstand tsunamis and cyclones.

CLIMATE REFUGEES

Climate change is a disaster from which local recovery may be impossible in some cases. Inundation due to sea level rise, competition for fresh water, loss of viability of traditional crops, as well as many other factors, may force people to leave their traditional homes permanently. Even if a community can re-settle as a group elsewhere, their family connections and cultural traditions may be damaged or diminished as some members seek alternate resettlement pathways.

At present, those who are displaced by the impacts

of climate change are not formally recognized as refugees under existing international conventions. Parishioners, unable to open their doors for climate refugees if countries do not let them in, may need to find ways to help from a distance.

SOLIDARITY WITH OTHER FAITHS

Laudato Si' was addressed to all people and has been well received by people of many faiths. Catholics around the world have joined hands with people of many faiths to take a stand on climate change.

INTERFAITH SOLIDARITY

ST. PATRICK'S CATHEDRAL Auckland, New Zealand



Photo courtesy of St. Patrick's Cathedral

In anticipation of the negotiations at COP21, priests and ministers from Catholic, Anglican, Presbyterian, Methodist, and other churches united in at St. Patrick's Cathedral for a service called "Prayer For Our Common Home." Father Larry Rustia, a priest from St. Patrick's, said "this is an opportunity to pray for our home, for the Pacific, for our leaders, and for the Church. We all must act, and the time for action is

now. We invite the people of Auckland to join us."

The service followed the Auckland People's Climate March, where leaders marched as part of a block called "Faith for Earth."

This story was reported by People's Climate March, New Zealand on 23 November 2015.

Interfaith groups have made enormous strides raising awareness of the moral aspects of environmental issues, providing training and education to congregations and faith groups, and bringing people together to address concerns about the common good.

At the same time, on the national and local levels, much still needs to be done, such as promoting ways of conserving energy.
- Pope Francis, Laudato Si' ¶180

BENCHMARKING AND CERTIFICATION

Benchmarking and certifying environmental performance promote environmental stewardship and energy conservation by encouraging and recognizing uptake of best practices. They can help motivate and sustain care for creation in parishes. Benchmarking and certification are also newsworthy. The Archdiocese of Chicago, IL (USA) made national news in September 2015 by announcing its intention to benchmark its 2,700 buildings using Energy Star Portfolio Manager. St. Francis of Assisi Parish in Triangle, VA (USA) also made the news with its certification by the interfaith organization GreenFaith in 2014.

BENCHMARKING BUILDING ENERGY USE

In terms of energy use, a building's performance last year can be a reference for its performance this year. Annual comparison to a single reference year is a useful way to track performance trends over a period of years.

Benchmarking is different in that it allows comparison of performance of a building in relation to its peers— buildings of comparable size, in

similar locations, and with similar use. Because there are so many buildings, and because buildings use so much energy, national governments have supported increasingly sophisticated benchmarking to account for the variety of building sizes, locations, and uses. While the initial focus was on commercial and multi-family residential buildings, more recent efforts have enabled houses of worship to participate.

Benchmarking is a technical process that requires some basic knowledge and data. The process varies from country to country, reflecting the diversity of energy issues worldwide.

Faith groups have helped make benchmarking commonplace. In 2012, Church of England launched its energy tracking and benchmarking tools, including sMeasure, for its 16,000 buildings in the United Kingdom, as part of its Shrink the Footprint campaign. In 2013, Catholic Earthcare Australia launched the National Energy Efficiency Network to provide community organizations with the information, inspiration, and support to become more energy efficient.

US EPA ENERGY STAR PORTFOLIO MANAGER FOR HOUSES OF WORSHIP



In the United States, any faith organization can benchmark its building energy performance with the free online software program Energy Star Portfolio Manager for Houses of Worship. The program requires street addresses, sizes (areas) of buildings, seating capacities, hours of use, and other practical data that are easily

obtained. Its advantages include: with authorization from the account holder, many energy companies will upload energy use and billing data directly to the parish's Portfolio Manager account, saving the parish the work of entering the data by hand, it translates performance metrics to an easily understood numerical score from 1 to 100,

relative to other houses of worship, buildings with scores of 75 and higher are eligible to apply for the widely recognized Energy Star logo (which requires additional measurements to assure adequacy of lighting, indoor air quality, and thermal comfort, so that awards are not given for skimping on basics)

... while the existing world order proves powerless to assume its responsibilities, local individuals and groups can make a real difference. They are able to instil a greater sense of responsibility, a strong sense of community, a readiness to protect others, a spirit of creativity

Pope Francis, *Laudato Si'* ¶1179

ENVIRONMENTAL CERTIFICATION AND AWARDS

Environmental certificate programs ensure that the certificate holder meets a well-defined set of criteria.

Some certificates are given once and for all, like a graduation diploma, while others (including the Energy Star logo for buildings in the USA) must be renewed annually.

Perhaps the best known, and perhaps also the most difficult certification to achieve for a building, is the Leadership in Energy & Environmental Design (LEED) certificate program. LEED "is a green building certification program that recognizes best-in-class building strategies and practices. To receive LEED certification, building projects satisfy prerequisites and earn points to achieve different levels of certification. Prerequisites and credits differ for each rating system, and teams choose the best fit for their project."¹² There are four levels of LEED certification: certificate, silver, gold, and platinum.

LEED certification is a substantial project. It is often a goal that is set before design even begins. The highly credible accreditation process is well regarded worldwide. St Gabriel's Passionist Parish in Toronto, Canada and several other new Catholic buildings have obtained LEED certifications.

Other certification and award programs are more accessible for parishes, and importantly, these include activities that engage parishioners and reach out to others. In the UK, CAFOD developed the livesimply award program, which encourages Catholic parishes to put faith into action by promoting simpler lifestyles and constructive action on global poverty and climate change.

Several interfaith organizations also offer awards and recognition for congregations demonstrating care for creation.

A Rocha is a family of Christian conservation

organizations begun in 1983 in Portugal. Its mission is to inspire, equip, and engage Christians and others to steward the Earth. A Rocha manages award schemes for churches and congregations in several countries, including the Eco-Church Award in England and Wales (new in 2016), and ongoing Eco-Congregation programs in Ireland, Scotland, Hungary, Norway, Canada, and the USA. A Rocha also administers the livesimply award scheme for CAFOD.

Green Church Network aims to empower faith communities in Canada in adopting environmentally aware practices through action and awareness, as well as rediscovering an eco-spirituality from the Christian tradition. Founded in 2007, the network has hosted Green Church Conferences since 2010, and offers a certification program for churches that demonstrate excellence in Green Operations including energy and water conservation, green cleaning, pest control, purchasing, recycling, and communication.

GreenFaith inspires, educates and mobilizes people of diverse religious backgrounds for environmental leadership in the USA. Founded in 1992, the group also offers energy saving services to congregations of any faith. They also maintain a listing of statements about climate change from religious leaders of many different faiths. The GreenFaith Sanctuary certification program is offered to houses of worship in the USA.

Interfaith Power and Light responds to global warming through the promotion of energy conservation, energy efficiency, and renewable energy in the USA. Founded as Episcopal Power and Light in 1998 with the help of Catholic Grace Cathedral in San Francisco, IPL expanded its mission to energy stewardship for all faiths. IPL offers Cool Congregation awards for significant energy savings at churches in the USA.

¹² US Green Building Council, LEED website <http://www.usgbc.org/leed>

ENVIRONMENTAL CERTIFICATION

ST. FRANCIS OF ASSISI PARISH, Triangle, VA USA



Photo courtesy of St. Francis of Assisi

St. Francis of Assisi Parish began the two-year GreenFaith Certification Program in 2012. It included a comprehensive audit, communications plan, and actions in the areas of spiritual growth, stewardship and environmental justice. Efforts were supported throughout the process by the staff of the interfaith GreenFaith.

Fr. Kevin Downey, O.F.M., Pastor, said "It was a bit controversial then, but with some strategic work, everything came together." Parishioners, including environmental lawyers, engineers and scientists, came forward to help. Success is evident in the extent of uptake of stewardship by general membership of the parish. The parish modeled the behavior, such

as recycling, reducing consumption, setting the thermostat, etc., and people took that to their homes and to their workplaces. The parish's GreenFaith effort has had a ripple effect, because many of the families are in the area temporarily. About twenty percent of the 2,000 plus families relocate every year, and they bring these practices wherever they go.

St. Francis of Assisi Parish was certified as a GreenFaith Sanctuary in June 2014. Rob Goraieb, O.F.S., parish Coordinator of Franciscan Action and Advocacy, noted "GreenFaith was a springboard for what comes next, what we're doing with our Care for Creation Committee and *Laudato Si'*. It doesn't end with certification."

ECO-CONGREGATION AWARD

BALLINEASPAIG PARISH, Dennehy's Cross, Cork, Ireland

Ballineaspai's Faith in Action Group is following Eco-Congregation Ireland guidelines in responding to *Laudato Si* and Pope Francis' call for "ecological conversion."

The parish, with the full support and encouragement of the parish priests, works to take an ecological approach to worship, lifestyle, property and finance management, community outreach, and care for the developing world. The parish was awarded an Eco award in 2015.

Programmes of talks, discussions, and workshops on aspects of the environment, climate change, and social justice are held each year. Articles and tips under the heading of "Creation Matters" are included

in the weekly parish bulletin. There is an ongoing focus on the plight of refugees and asylum seekers, and the parish has campaigned on their behalf. The parish promotes the availability and use of Fairtrade products and became Ireland's first Fairtrade Parish in 2006.

The recent magnificent refurbishment of the parish church used completely eco-friendly methods and materials. A biodiversity garden has been developed in the grounds. Special liturgical celebrations are held for Earth Hour and at Harvest time and a Harvest Festival has provided not only a celebration but a social occasion and an opportunity for fundraising.

For more than fifteen years Ballineaspai parish has linked with Turkwel Parish in Kenya. Through fundraising events, the parish has provided support for sinking

wells to provide water for drinking and irrigation of crops, building a health clinic and stocking it with medication and equipment, installing solar panels in clinic and schools, and running a feeding programme for children.

Máire, Chair of the Faith in Action Group, observed: "The Eco-Congregation resources, support, encouragement and interfaith involvement have greatly helped our focus and action on ecological justice."



Photo courtesy of Ballineaspai Parish

RECOMMENDED RESOURCES -- DOCUMENTS, VIDEOS, AND ONLINE TOOLS

There are many excellent resources about faith and climate change available free online. In fact, there are so many that it was not possible to review them all for this Guide. Below is a selection of those that inspired us during the preparation of the GCCM Guide. We highly recommend these for Catholic parishes.

Our list includes resources from Catholic, interfaith, and other faith organizations, as well as secular organizations.

For links to these and additional resources, see the GCCM website:

www.catholicclimatemovement.global/resources

ABOUT THE PAPAL ENCYCLICAL, LAUDATO SI'

Laudato Si', On Care for Our Common Home, Pope Francis, May 25, 2015 (issued by the Vatican on June 18, 2015)

Top 10 Things You Need to Know About Laudato Si', (video) America Media, a Jesuit Ministry, June 18, 2015

Laudato Si' Study and Action Guide for Individuals and Small Groups, Columban Center for Advocacy and Outreach, July 2015

Laudato Si' Study Guide, four sessions, CAFOD,

ABOUT STARTING A CARE FOR CREATION TEAM

Green Team Mobilization, Green Churches Network, Canada, September 9, 2012

Green Team Frequently Asked Questions, Episcopal Ecological Network, and How to Start a Green Team at Your Church (adapted by from Green Team FAQs by Patrick Cage and the Rev. Margaret Bullitt-Jonas)

ABOUT REDUCING PARISH EMISSIONS

Cool Congregations Calculator, Interfaith Power and Light (requires registration)

Energy Webinar Series (video and slide set), GreenFaith, October 29 and November 5, 2015

How To Guide, Opportunity Assessment Tool, National Energy Efficiency Network, Catholic Earthcare Australia (since 2013)

Eco-congregation Module 13, Climate change, A Rocha, 2012

ABOUT EDUCATING PARISHIONERS

CST 101 / Caring for God's Creation, (video), one of seven Catholic Social Teachings 101 videos, Catholic Relief Services, August 31, 2015

Eco-Schools, Foundation for Environmental Education (website and programs in 59 countries)

Catechetical Curriculum Framework on Laudato Si', On Care for Our Common Home, Parish Toolkit Resources, Archdiocese of Washington DC, June 2015

ABOUT ADVOCACY AND SOLIDARITY

COP21 Q&A: What is GHG Emissions Neutrality in the Context of the Paris Agreement, Kelly Levin et al., World Resources Institute, December 11, 2015

Appeal to COP 21 Negotiating Parties, Cardinals, Patriarchs and Bishops from across the globe representing the continental groupings of national episcopal conferences, October 26, 2015

Declaration of the Vatican Workshop on Human Slavery and Climate Change, signed by Pope Francis and mayors from around the world, July 22, 2015

Final Declaration of the Vatican Workshop, "Protect the Earth, Dignify Humanity: The Moral Dimensions of Climate Change and Sustainable Humanity," April 28, 2015

ABOUT BENCHMARKING AND CERTIFICATION

Guide to LEED Certification, US Green Building Council

Energy Star® Action Workbook for Congregations, US Environmental Protection Agency, February 2014

ABOUT CLIMATE CHANGE

Climate Change 2014 Synthesis Report, Intergovernmental Panel on Climate Change, November 2, 2014; and other reports in the IPCC Fifth Assessment Report series. These reports are lengthy and authoritative.

Cool It, National Geographic, the Climate Change Issue (print and online) November 2015

RECOMMENDED RESOURCES – CATHOLIC ORGANIZATIONS

All of the GCCM partner organizations, and many other faith organizations, are working on a broad array of issues to address the causes and impacts of climate change. For a complete listing, and links to websites, please see the Partners page of the GCCM website at catholicclimatemovement.global/partners/. Below is a selection of organizations known for their work and reporting on climate change.

CATHOLIC GROUPS FOCUSED ON CLIMATE CHANGE

The Global Catholic Climate Movement (GCCM) acts on the moral imperative of responding to and raising awareness about climate change. GCCM focuses on international advocacy and action for climate justice, including prayer, pilgrimage, and a petition collecting over 900,000 signatures.

Catholic Climate Covenant, The Catholic Climate Covenant, brings Catholic people and institutions together to care for the people God loves and to live justly on God's Earth in the USA.

CATHOLIC ORGANIZATIONS OFFERING USEFUL RESOURCES

Association of Catholic Colleges and Universities provides a variety of educational materials on the Encyclical Laudato Si' and a sustainability toolkit for Catholic higher education.

CAFOD is the official Catholic aid agency in England and Wales. CAFOD's One Climate, One World campaign brings together Catholic individuals and parishes to call for action on climate change. It also coordinates the livesimply award program offers guidance and recognition for parishes wanting to be more sustainable, live more simply and act in solidarity with people living in poverty.

Canadian Catholic Organization for Development and Peace provides educational resources through its 2015 campaign Create a Climate of Change

Catholic Earthcare Australia is the ecological agency for the Catholic Church in Australia.

Catholic Relief Services and Caritas (with national offices in many countries) offers relief services and educational resources on 'Care for Creation'.

Catholic Youth Network for Sustainability in Africa (CYNESA) is the platform for all young Catholics in Africa, promoting responsible stewardship of the environment.

CIDSE is an alliance of 17 member organizations from Europe and North America who challenge governments, business, churches, and international bodies to adopt policies and behavior that promote human rights, social justice and sustainable development. Most of the members also provide resources on environment and climate change.

Pontifical Council for Justice and Peace assisted Pope Francis in preparing Laudato Si'. The Council conducts research and outreach on climate change and other issues relating to the social teachings of the Catholic Church.

REGIONAL AND NATIONAL CATHOLIC ORGANIZATIONS

Locally relevant resources on climate change may be available from

- local dioceses and archdioceses
- local Catholic colleges and universities
- national conferences of Catholic bishops and their regional federations
- religious orders, which may have a presence in your community
- organizations of Catholic youth, students, volunteers, and others

Climate-change related resources and programs may be listed under headings such as peace, justice, environment, integral ecology, creation care, social and human development, or combinations of these.

CATHOLIC ORDERS

Columbans, Franciscans, Jesuits and numerous other religious orders of priests, monks, sisters and lay religious are working to care for God's creation and to fight against global climate change. Many also provide resources on their websites.

CATHOLIC NEWS ORGANIZATIONS

Catholic World Report, UCA News (Catholic News Asia), National Catholic Reporter (USA)

(free subscription to eco Catholic blog), National Catholic Register, Catholic News Agency, Our Sunday Visitor Vatican News/Radio Vatican, Rome Reports, Eco Jesuit, EWTN News, Catholic Herald UK, Catholic News Service, Zenit News, Your local diocesan newspaper

CLIMATE ACTION IDEA CHECKLIST

Below is a list of the ideas for climate action presented in the GCCM Guide. Most of these can be done at any time, in any order, with little or no budget, by volunteers with little or no special expertise in climate change.

FORMING A PARISH CARE FOR CREATION TEAM

- meet regularly
- engage the pastor / parish priest / parish council

REDUCING PARISH EMISSIONS

- monitor parish energy use reduce energy use in buildings:
- turn things off set back the temperature or use a programmable thermostat
- replace inefficient light bulbs, devices, appliances and vehicles with high efficiency ones
- conduct a parish energy audit or other energy saving project* substitute renewable energy for conventional energy: at the parish* via the grid*
- reduce single occupant trips in gas- and petrol-powered parish vehicles practice green purchasing and sustainable gardening and grounds maintenance
- reduce waste and promote recycling and (where feasible) composting at parish facilities

INSPIRING PARISHIONERS

- inspire care for creation through creation-themed prayer, devotions, and special liturgies
- bring existing energy and climate change resources to the parish
- promote climate compatible lifestyles among parishioners in parish schools* and faith formation classes, incorporate: Laudato Si' :care for creation make parish recycling, composting, and green purchasing practices visible at parish functions
- organize creation themed or energy saving activities or events for parishioners participation
- communicate with parishioners about conservation measures being taken by the parish

ADVOCACY AND SOLIDARITY

- observe Earth Day (April 22), World Environment Day (June 5), World Day of Prayer for Creation (September 1), the Feast of St. Francis of Assisi (October 4), the Season of Creation (September 1 to October 4) and other community celebrations of creation
- raise awareness for worthy local, national, and global campaigns for action on climate change
- focus on the need for governments to deliver on, and to improve, pledges made at COP21 and elsewhere, so as to limit global average temperature rise to 1.5 °C above pre-industrial levels
- join other groups working on climate change—be they Catholic, interfaith, civic, or societal
- show solidarity with those harmed or at risk from climate change by supporting organizations that provide:
 - disaster relief and recovery climate adaptation and resilience

BENCHMARKING AND CERTIFICATION

- participate in a building energy benchmarking program*
- qualify for an environmental award, certificate or other recognition*

* may require budget or expertise

We need to strengthen the conviction that we are one single human family. There are no frontiers or barriers, political or social, behind which we can hide, still less is there room for the globalization of indifference.

- Pope Francis, Laudato Si' ¶152

GLOBAL CATHOLIC CLIMATE MOVEMENT(GCCM)



The GCCM is a community of thousands of Catholics responding to the Pope's call to action in the Laudato Si' encyclical. We are lay people, priests, religious, bishops and others working together on the climate change crisis. We live in many countries and we speak many languages. We are united by our Catholic faith and by the moral imperative of responding to and raising awareness about climate change. We actively encourage the renewal of our relationship with God's creation, for current and future generations.

GCCM MEMBERS

GCCM members from global network of over 285 organizations working together to address the causes and consequences of climate change. All Catholic organizations, including Catholic parishes and dioceses, are welcome to join the GCCM network. To become a member of GCCM, visit our website at <https://catholicclimatemovement.global/member-organizations/>.

GCCM ECO-PARISH GUIDE PROJECT

The GCCM noted a need for practical advice on bringing Laudato Si' to life at many Catholic parishes. Mindful of the limitations of human and financial resources at many parishes, the GCCM's Guide focuses on actions that can be led by parish volunteers with no special expertise and at little or no cost to the parish. The drafting of the GCCM Guide itself was a volunteer effort.

GCCM ECO-PARISH GUIDE TEAM

The Eco-Parish Guide was led by Dr. Gail Kendall with core team members Tomás Insua, Christina Leano, Fr. John Leydon, Bill Patenaude, Jacqui Remond, Kevin Roussell, Ciara Shannon, and Marie Venner, with support from other members of the GCCM Steering Committee, staff and volunteers. We thank Romeo Ogmar, Jr for his graphic design skills in putting together this publication. We thank all those whom we interviewed for sharing their Catholic parish experience and for providing quotes, photos and feedback for the GCCM Guide.

GCCM ECO-PARISH GUIDE AND OTHER RESOURCES

The GCCM would like to acknowledge the efforts of Catholic and many other faith organizations which are addressing global climate change for all of us. The GCCM Guide makes frequent reference to documents, videos, project and the work of others, and we encourage our readers to consult these and additional resources directly

JOIN A GROWING MOVEMENT OF ECO-PARISHES!

We hope this guide serves as inspiration to move you and your community to respond to protect our common home. Please send us updates on how your community is putting the guide into practice at hello@catholicclimatemovement.global. You can also register your parish as an eco-parish and sign up for more resources at catholicclimatemovement.global/eco-parish

We also welcome your comments or feedback on this guide at hello@catholicclimatemovement.global

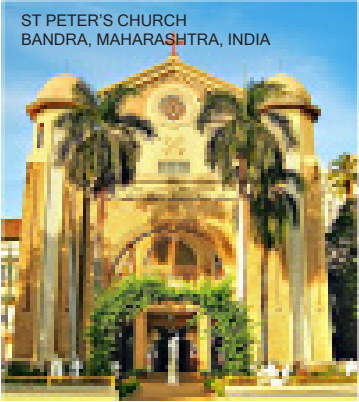
ST FRANCIS OF ASSISI CHURCH
TRIANGLE, VA USA



CHURCH OF THE NATIVITY OF
MARY, SINGAPORE



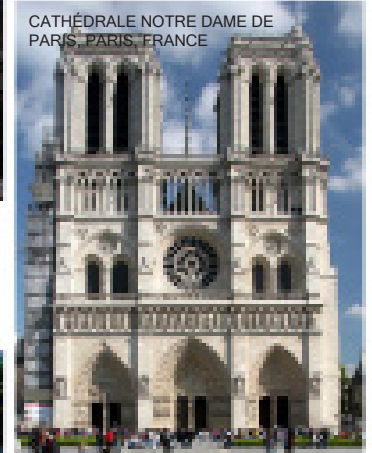
ST PETER'S CHURCH
BANDRA, MAHARASHTRA, INDIA



CATEDRAL DA SÉ DE SÃO PAULO
SÃO PAULO, BRASIL



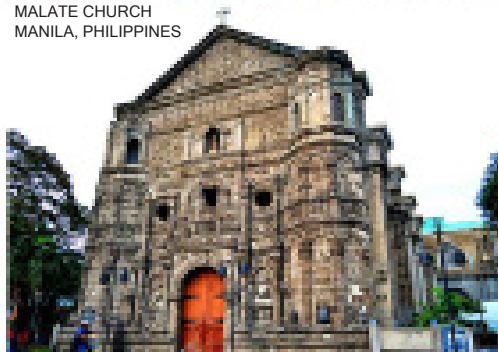
CATHÉDRALE NOTRE DAME DE
PARIS, PARIS, FRANCE



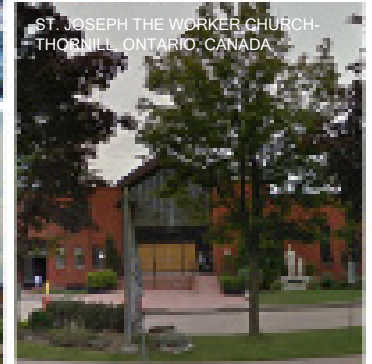
ST TERESA OF AVILA
SAN FRANCISCO, CA USA



MALATE CHURCH
MANILA, PHILIPPINES



ST. JOSEPH THE WORKER CHURCH
THORNHILL, ONTARIO, CANADA



ST. PATRICK'S CATHEDRAL
AUCKLAND, NEW ZEALAND



OUR LADY OF CISNE CHURCH
TENA, NAPO, ECUADOR



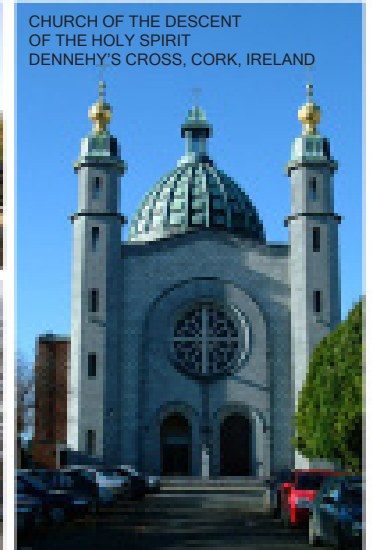
REGINA MUNDI CHURCH
JOHANNESBURG, SOUTH
AFRICA



HOLY FAMILY CHURCH
EMERTON, NSW AUSTRALIA



CHURCH OF THE DESCENT
OF THE HOLY SPIRIT
DENNEHY'S CROSS, CORK, IRELAND



ST. JOHN BOSCO CHURCH
WOODLEY, BERKSHIRE UK

