



September 19, 2022

6:30 PM - 8:00 PM

Explore the Birds of Costa Rica with Deacon Clarke

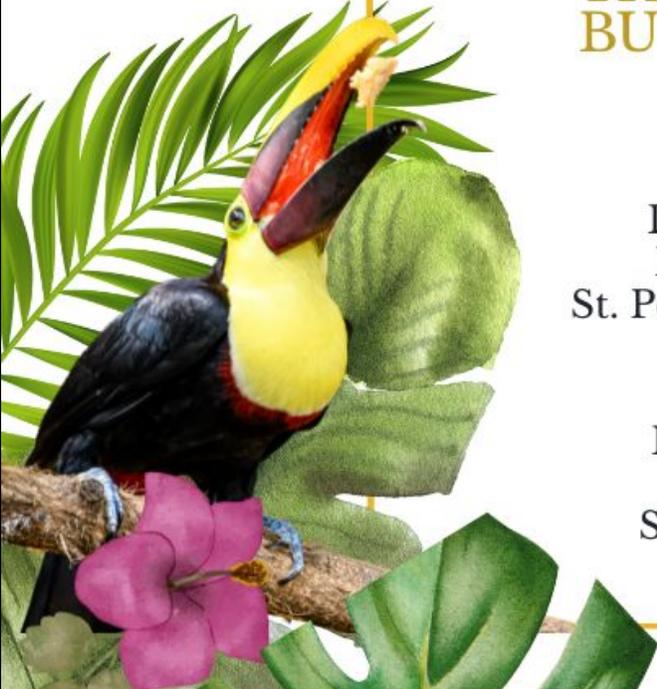
THE HEAVENS DECLARE
THE GLORY OF GOD ...
BUT FOR HOW LONG?

Speakers:

Deacon Clarke Cochran,
Dr. Catherine Wright &
St. Peter Care for Creation Team

Location: Benedict Hall
(2nd Floor)

St. Peter Catholic Church



Opening Prayer

“Prayer for extinct and endangered species”

Lord God, our Creator, all life forms that exist on our sister mother earth come from Your hands.

You created us in the diversity of genera and species, giving each of Your creatures a unique and singular mark.

We praise You, O Father, with all Your creatures!

We praise You, our Lord, for biodiversity!

We contemplate Your action that transforms and recreates everything, in the diversity of species that throughout natural history have been appearing or being naturally extinct, as a natural result of evolution.

Each species contributes, in its own way to offer humanity, free of charge, the ecosystemic services that beautify, dignify and fill human life with colors and meaning.

Opening Prayer, continued

However, today we see the threat to the diversity of life in our common home, and that human action throughout history has drastically accelerated the rate of extinction of species, increasing up to 1,000 times the natural rates.

Inspired by Pope Francis, we want to reaffirm:

“We have no right to do so” (LS 33).

We want to turn the cry of the earth and the cry of the poor into our cry.

Teach us, Lord, to care for creation!

Inspire us to commit ourselves and engage in concrete actions to protect and conserve every species on our planet.

Through Christ, Your Son and our brother. Amen.

By Fr. Wellington Buarque, OFM, Laudato Si' Animator. Pernambuco, Brazil.



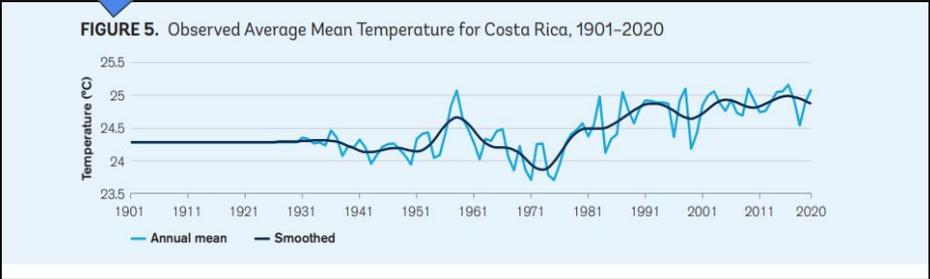
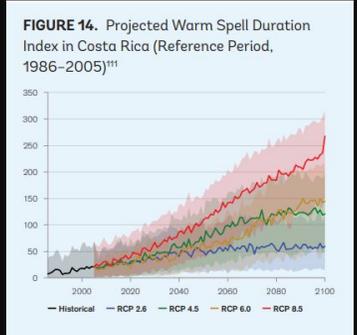
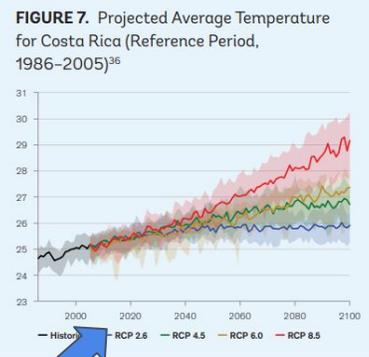
Maps

Costa Rica

- International Boundary
- Road
- Highway
- River
- National Capital
- Province Capital
- City or Town

0 25 50 KM
0 25 50 Miles

© 2019 Geology.com



Rain Forest: area near Sarapiquí River in Heredia Province



Cloud Forest: In San Jose Province -- Savegre Valley on the Savegre River, which flows to the Pacific.



Most at risk to climate caused Sea level Rise

Amazing Costa Rica

- Majestic Waterfalls
- Howler Monkeys





Golden Orb Weaving Spider



Armoured Millipede



White-faced
Capuchin
Monkeys



Green Basilisk



Red-eyed Leaf Frog



Keel-billed (Rainbow) Toucan



Bananaquit

But It's All about the Birds!



A Surprise Meeting: Two Neighbors



Costa Rica's Cloud Forest

Five Magnificent Neighbors



Slaty Flowerpiercer

Slaty Flowerpiercer

“Escalator to Extinction”

THREATS

Animals found in tropical mountains are known to be especially vulnerable to climate change. Why?

- Sensitive to warming temperatures because they have low metabolic rates and do not usually have to adapt to changes in temperature
- New diseases
- Food resources and habitat might not be able to shift within a short period of time



Volcano
Hummingbird

A close-up photograph of a Volcano Hummingbird hovering in front of a cluster of bright orange and yellow tubular flowers. The bird is in sharp focus, showing its iridescent green and white feathers and its long, thin beak. The background is a soft, out-of-focus green.

Volcano Hummingbird

THREATS

- Nectar and flower production is negatively impacted by temperature (increasing), precipitation (decreasing) and cloud cover (less mist in dry season)
- Hummingbirds directly impacted by declining precipitation changes and warmer temperatures
- Decrease in growth rate of forest too (less habitat and less carbon sink)
- Displacement (outcompeted) by birds from lower elevation



Lesser Violetear

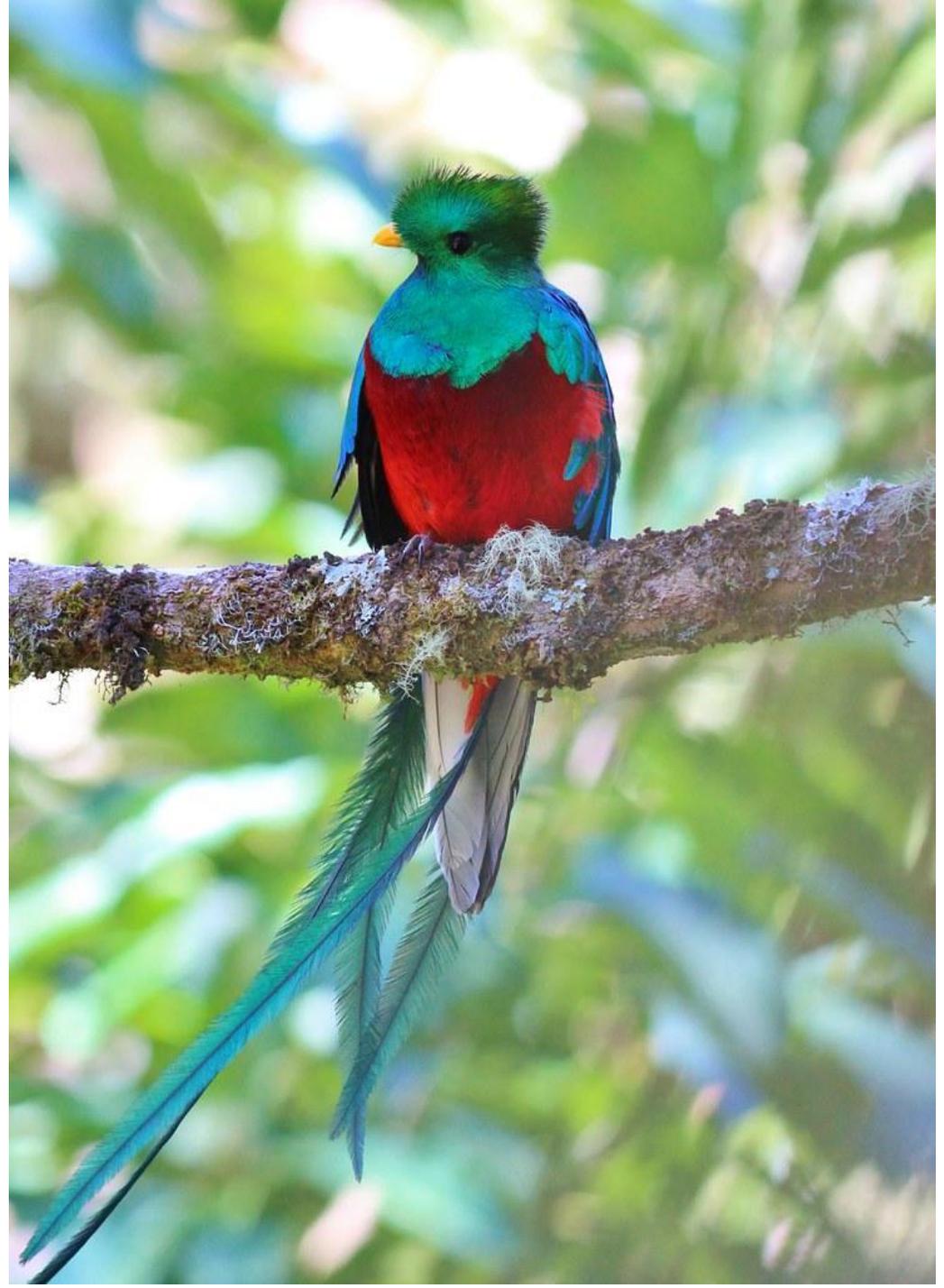
Lesser Violetear

THREATS

- Rising temperatures will cause a shift upwards in hummingbird ranges (around 300-700m)
- Nectar producing plants will die out or shift ranges due to changing climate
- Change in feeding ranges will cause the birds to expend even more energy to defend the plants they have access to -- thus requiring even more food & vulnerable to predators



Resplendent Quetzal



THREATS

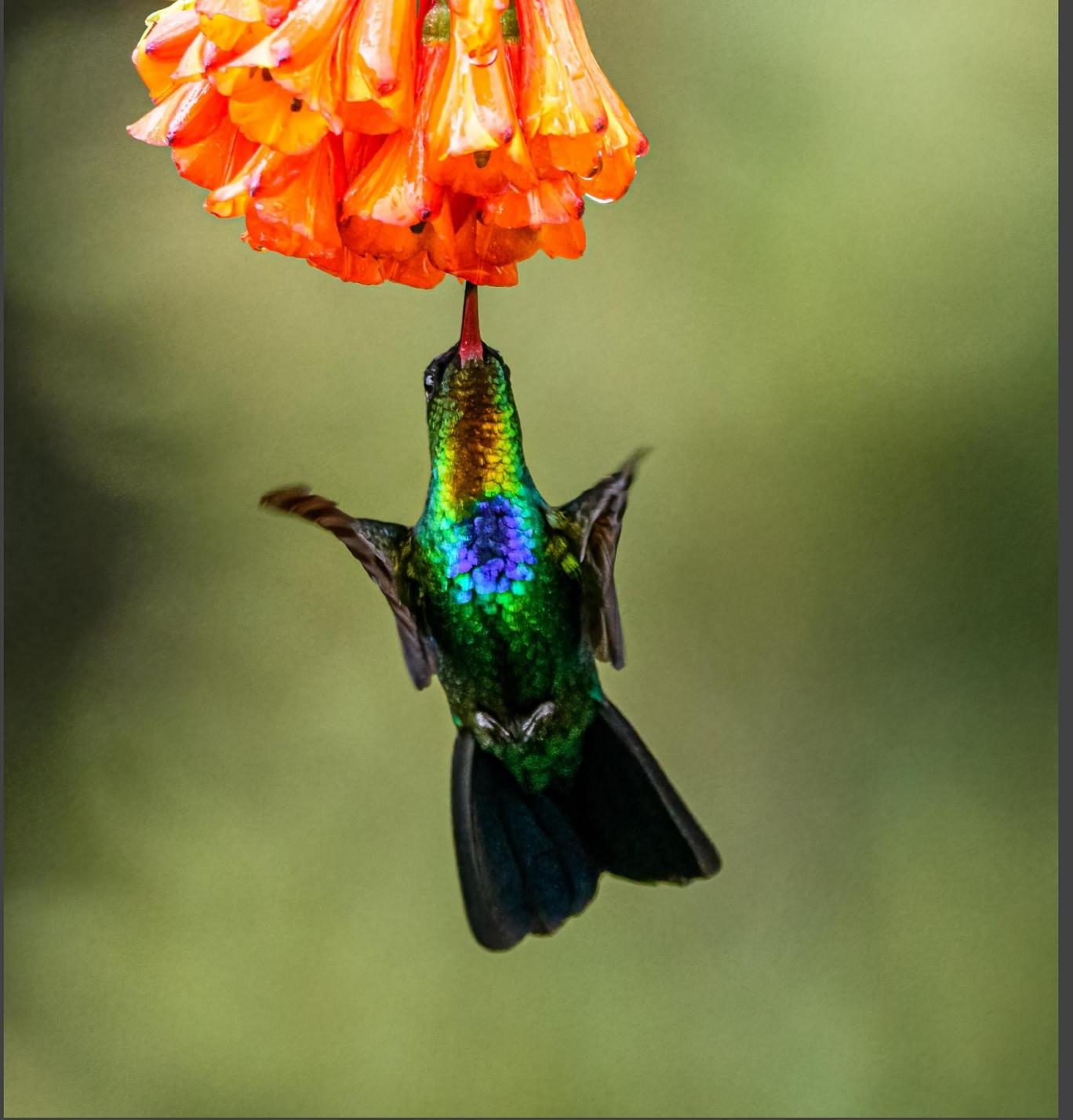
New Predators: The Keel Billed Toucan is migrating from lower elevation and these nest predators are eating the eggs of the Quetzal. They have not evolved to adapt to this new predator since the migration has been recent and quick (in evolutionary terms)

Habitat loss: their habitats are slowly shifting to higher elevations, driven by rising temperatures worldwide, but they are running out of room at the top of the mountain



Resplendent
Quetzal

Fiery-throated
Hummingbird



THREATS

- Higher temperatures are driving sea-level rise and changes in snow cover (at high altitudes) which in turn are reshaping when and where the nectar resources hummingbirds rely on are available
- The flowers are blooming earlier so hummingbirds are having to adapt too quickly to this drastic change (no food -- nectar is 90% of their diet)
- Changing the timing of hummingbirds to feeding areas also changes pollination of plants in their habitats



Fiery-throated Hummingbird



Rainforests of Costa Rica

Five Magnificent Neighbors



Montezuma Oropendula

Montezuma Oropendula



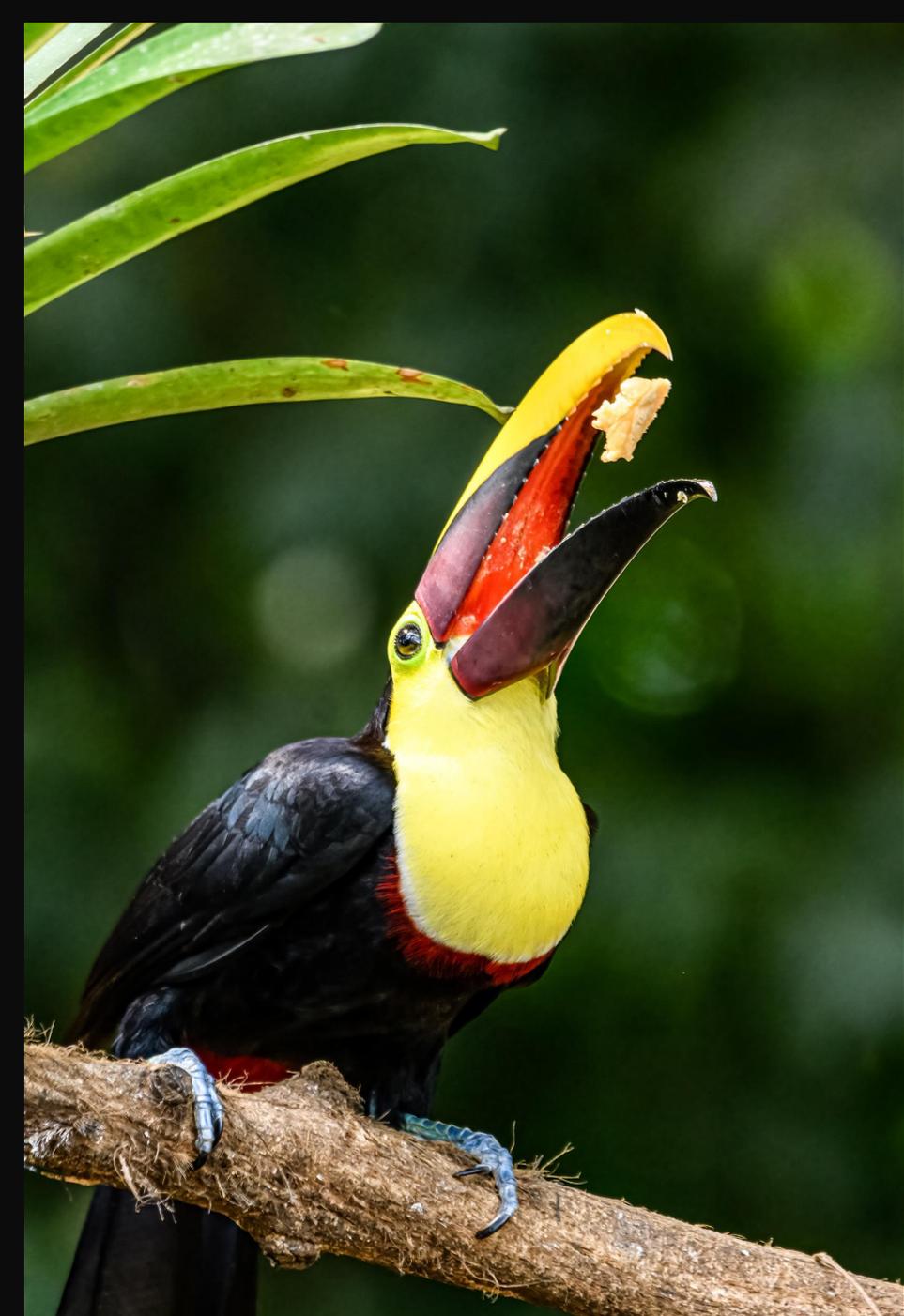
THREATS

Deforestation due to human development, flooding, poor land use choices

Their wide range of food sources make them more resilient

Rise in temperatures impact beginning of breeding season and food sources -- again they seem resilient and highly adaptable

Increasing intensity of weather events can impact survival



Yellow-Throated Toucan

THREATS

- Higher temperatures are pushing them to higher elevation -- more (new) competition for food and space
- Habitat destruction and decreased ability to forage due to more frequent and more intense weather events (droughts, heat waves, fires, etc...)
- Emerging new diseases due to temperature changes (e.g., malaria bearing mosquito at new elevations)
- Contaminated water sources (e.g., saline, sediment, waste)
- Longer and less regular dry seasons and droughts may reduce populations of tropical birds that often time their breeding with wet seasons when food is abundant





White-necked
Jacobin



THREATS

- Rising temperatures will cause a shift upwards in hummingbird ranges -- new competition for food and space
- Nectar producing plants will die out or shift ranges due to changing climate
- Change in feeding ranges will cause the birds to expend even more energy (defense, fuel breeding, etc...) thus requiring even more food. Low energy and increased feeding makes them vulnerable to predators



Green-breasted
Mango

Green-breasted Mango



THREATS

- Habitat fragmentation
- Changes in food supply (nectar)
- Energy Consumption due to changing food sources
- Breeding issues (if in sync with nectar producing plants)
- Pollution



Great Green Macaw

Great Green Macaw



Endangered Species

THREATS

- Habitat loss to deforestation -- logging of mountain Almendro tree
- Habitat fragmentation (banana crops, pineapple industry, cattle farming)
- Loss of trees as main food source (dependant on fruit from the tree in dry season)
- Illegal Pet trade -- hunting for feathers
- Competition for resources by others in their higher altitude habitats
- Intense weather events disrupt feeding and breeding patterns



Bonus Bird:
Clay-colored
Thrush
(National Bird
of Costa Rica)



Tennessee Warbler



Baltimore Oriole



Laudato Si'

Wisdom from
Pope Francis

**The Heavens Declare
the Glory of God ...**

Where is Our Hope for Creation?

We discover hope in the following places...

Companies Caring



Government Caring



Courage to Speak Out



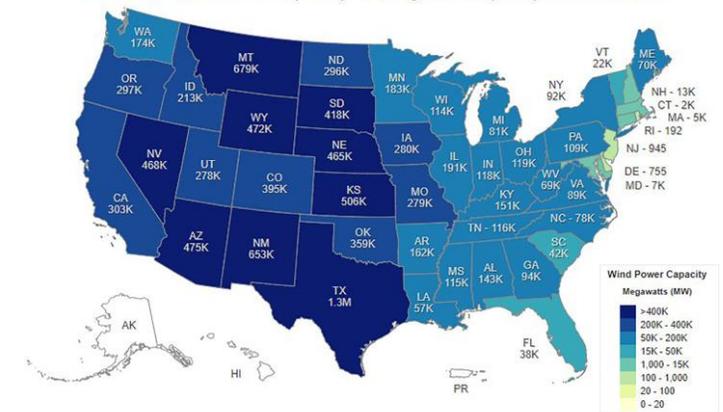
Windmills in New England



**Parishes Caring
(Across the Nation)**
Conference Summer 2022 hosted by
Catholic Climate Covenant
Check Out resources at
www.thewrightcotheologian.com
"Creation Care Teams"

**Wind Energy Helps
Offset Energy Crises
(TX and other states)**

U.S. Potential Wind Capacity in Megawatts (MW) at 80 Meters



Total Potential Wind Capacity: 10,640,080 MW

Open Conversation



Where Do You Find Hope?
What Can You Do To Care for Our Many Neighbors

Engaging in Care for Creation at St. Peter

Guiding Principles

Prayer

Education

Action

Advocacy

Collaboration

Higher Time Commitment

Serving on the Care for Creation Steering Committee

- Meet 1-2 times/month for 75 – 90 min
- Plan events such as this one
- Engage with other pastoral ministries

Lower Time Commitment

- Attend Care for Creation events
- Advocate for reducing reliance on single use items within the parish
- Bring your own reusable water bottle to parish events

In the Community...

- Learn more about and engage with organizations that work across Charlotte and NC, such as CleanAIRE NC, TreesCharlotte, and the Innovation Barn.
- Look for opportunities to advocate for change locally and state-wide, such as learning about and submitting comments on the NC Carbon Plan.

In your Home...

- Conserve energy by increasing your AC temperature in the summer, lowering your heat in the winter, and using the cold cycle of your washing machine more frequently.
- Before you click the “Buy” button, ask yourself if all the extra packaging is worth it.
- Divest your personal finances from fossil fuel.

Upcoming Events at St. Peter

September 1 - October 4

Pill Bottle Collection

Accepted items include:

- Prescription and over-the counter pill bottles
- Large and small pill bottles
- Pill Bottles with and without secure caps (child-resistant)

Please do your best to remove labels from prescription bottles.



*For everything there is a season and a time
for every matter under Heaven.*

-Ecclesiastes 3:1

Gathering to Celebrate the Autumn Equinox Harvest

Latta Nature Preserve

Saturday, September 24, 2022

10:00 - 11:30AM

A Collaborative Offering of the Care for
Creation Team and Ignatian Spirituality Ministry

Upcoming Events at St. Peter, continued

When you throw something away..where
is AWAY?

Waste & Recycling Education Event



October 9, 2022
10:15 - 11:15 AM
Biss Hall



Learn about how YOU can reduce your family's
waste stream through reducing consumption,
reusing, repurposing, and finally recycling RIGHT.

Concluding Prayer

God of all living things,

On the third day, you brought forth vegetation:

Every plant that bears seed

Every tree that bears fruit.

You saw that it was good

And it pleased you.

How creation must have danced to know of your pleasure.

May our stewardship of this garden so please you.

May our protection of your fertile ground so please you.

May our just treatment of all who labor in your fields so please you.

May our sharing of and care for your life-giving water so please you.

May our sharing of the fruits of our harvest so please you.

Concluding Prayer continued

Lord, even before you breathed us into existence,
This garden you created -
 unfathomably bountiful,
 unutterably beautiful.
And in your love for us, thought to place us among it.

Make us worthy of this earth:
 in what we sow and what we reap,
 in what we plant and what we prune.
So that when that last harvest comes,
When we are called to stand before you,
It may once more be said of this people:
 “He saw that it was good.”

Amen