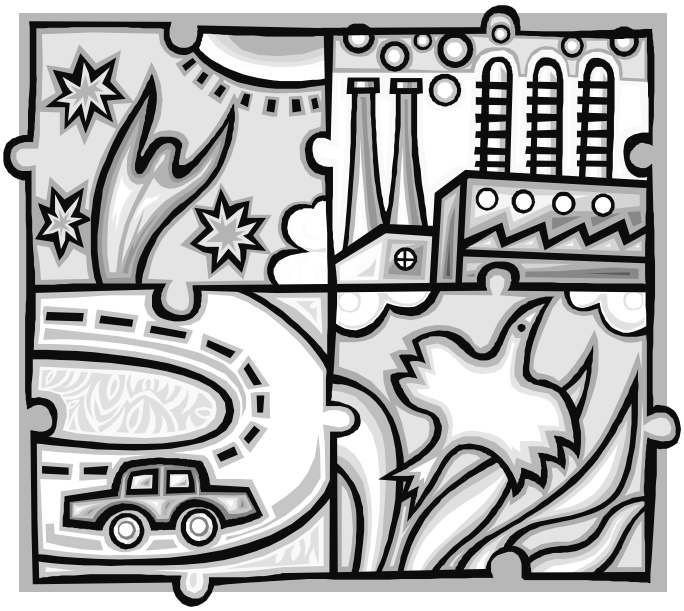
TO SERVE CHRIST
IN
ALL CREATION



A Study Guide and Discussion Course for Province One

Based on the Pastoral Letter of the Episcopal Bishops of New England

TO SERVE CHRIST IN ALL CREATION

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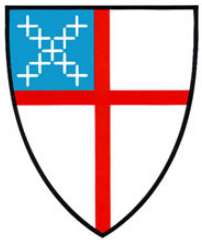
Based on the Pastoral Letter of the Episcopal Bishops of New England

"Who will believe the church's declaration that "God so loved the world" (John 3:16) if we ourselves do not?"

--Province One Bishops' Pastoral Letter



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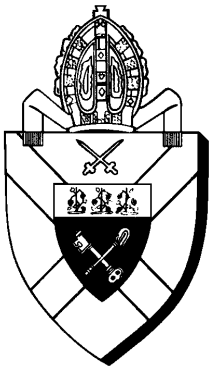

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TO SERVE CHRIST IN ALL CREATION

A Pastoral Letter from the Episcopal Bishops of New England

In thanksgiving for the gift of God's creation and with an urgent concern for the health and stewardship of the world, we your bishops issue this Pastoral Letter on the Environment. We know that the environmental crisis is a matter of great concern to many Episcopalians and we know that many of you have acted more fully and more faithfully than we ourselves have. We confess our past complacency, ignorance and neglect. We regret Christian teachings that claim or imply that human beings have divine sanction to destroy God's creation. We pledge our prayers, our time, our leadership and our energies to the work that needs to be done. We encourage all members of the Episcopal Church in New England to see in the promises of the Baptismal Covenant the call to serve Christ in all creation.

Scripture and tradition remind us that the whole earth is filled with the glory of God. Here in our beloved New England we perceive that glory in wild forests and open fields, in clear lakes and rocky seashores, in mountains, dunes, and rolling hills. With Martin Luther, we know that "God writes the Gospel, not in the Bible alone, but also on trees, and the flowers and the clouds and stars." With Thomas Aquinas, we affirm that "Revelation comes in two volumes - the Bible and nature." The world is God's creation, and God delights in it ("God saw everything that [God] had made, and indeed, it was very good," Genesis 1:31; "The heavens declare the glory of God, and the firmament shows [God's] handiwork," Psalm 19:1). The land and the rivers, the air and the sea belong to God, not to human beings ("The earth is the Lord's and all that is in it," Psalm 24:1). We are part of the created order, not separate from it, and our first calling by God is to be the caretakers of creation (Genesis 2:4b-8, 15). Reckless destruction of nature is a sign of estrangement from God. ("There is . . . no knowledge of God in the land . . . Therefore the land mourns, and all who live in it languish; together with the wild animals and the birds of the air, even the fish of the sea are perishing," Hosea 4:1b, 3; "Hurt not the earth, neither the sea nor the trees," Revelation 7:3).

God's earth and all God's creatures now face perilous and potentially cataclysmic changes as a direct result of human activities. New Englanders are acutely aware of the environmental challenges we face in our own small corner of the world, from the collapse of fisheries to the loss of farmlands and wetlands, from smog to acid rain. Airborne mercury poisoning, suburban sprawl, the loss of wilderness, overuse of pesticides and other toxins, extinction of species - these are just a few of the environmental hazards with which we must contend.

One of the most daunting challenges we face is global climate change. Many scientists agree that if we burn fossil fuels at expected rates, global warming caused by human activities could raise worldwide average temperatures between 3 and 11 degrees Fahrenheit in this century. In New England, climate change may cause flooding in coastal areas, reduce the quality of our region's fresh water, imperil agriculture, and increase the outbreaks of infectious disease. Within this century, New England may lose its maple, birch, and beech trees. We face the loss of our spectacular fall colors and the end of fall-foliage tourism, as well as the destruction of our region's maple sugar industry. (1)

Global warming is but one stark example of the troubled relationship between humanity and the natural world. Environmental issues are not just scientific, political, or economic issues, but ones that are profoundly moral and spiritual, as well. As Christians we cannot remain silent. Christianity offers an imperiled world the conviction that God's creation is good, and that God in Christ has redeemed not only the individual human soul, but also the whole of creation. In Christ, "all the fullness of God was pleased to dwell, and through him God was pleased to reconcile to himself all things, whether on earth or in heaven, making peace by the blood of his cross" (Colossians 1:19-20). Creation is thus made new (Revelation 21:5).

Just as God's salvation encompasses all creation, so too does Jesus call us to love our neighbors as ourselves. Who is our neighbor? When Jesus was asked that question, he responded with the story of the Good Samaritan (Luke 10:29-37). Today, the natural world is under assault, forests are being stripped and oceans plundered, natural resources are being exhausted and entire species killed. Today, the world is being stripped, beaten, and left half dead. Is it not possible to recognize all creation as our "neighbor"?

The poor, the marginalized, and the least powerful of our human neighbors are those who suffer most from illness and pollution caused by environmental degradation. Generators, incinerators, and waste disposal facilities are concentrated in impoverished neighborhoods; children in our inner cities suffer alarming rates of asthma; overemphasis on the use of private vehicles deprives the

poor of transportation. Exploitation of the poor is closely linked to exploitation of the earth, and our quest for social justice and economic sustainability must rest on a foundation of ecological stability. As baptized Christians, we are clearly called to care for creation, loving our neighbors as ourselves. Through prayer and action to protect the earth, we acknowledge the ongoing redemption of all creation in Christ (2 Corinthians 5:19a), and we minister to Christ himself, who particularly identifies with the outcast and suffering (Matthew 25:35-36).

Lest we experience despair, lest we feel the hopeless conviction that it is too late to change anything, too late to turn this around, we must root ourselves in the deepest convictions of our faith. We put our trust in a God who loves every inch of creation and whose covenant with Creation can never be broken ("I will . . . remember the everlasting covenant between God and every living creature of all flesh that is on the earth," Genesis 9:16). We share in Christ's crucifixion, letting ourselves feel and mourn the wounds of Creation. We share in Christ's resurrection, bearing witness to the Christ who bursts out of the tomb, who proclaims that life, not death, has the last word, and who gives us power to roll away the stone. We receive the Holy Spirit, source of all truth, who sends forth faithful stewards of God's creation. We nourish ourselves at the Eucharistic table, where Christ gives himself to us in the natural elements of bread and wine, and restores our connections not only with God and one another, but also with the whole web of creation.

As brothers and sisters in Christ, we commit ourselves and we urge every Episcopalian in every parish and diocese throughout the Province of New England:

· To act together to honor the goodness and sacredness of God's creation;
· To acknowledge the urgency of the planetary crisis in which we now find ourselves;
· To pray and take action to restore a right relationship between humankind and creation;
· To lift up prayers in personal and public worship for environmental justice, human rights, and sustainable development;
· To repent of greed and waste, and to seek simplicity of life;
· To commit ourselves to energy conservation and the use of clean, renewable sources of energy;
· To reduce, reuse, and recycle, and as far as possible to buy products from recycled materials;
· To realize that, through participation in community, public policy, and business decision-making, we have corporate as well as individual opportunities to practice environmental stewardship and justice;
· To seek to understand and uproot the political, social, and economic causes of environmental abuse.

In order to support these commitments, we call for a Provincial Convocation on the Environment in 2003.
Who will believe the church's declaration that "God so loved the world" (John 3:16) if we ourselves do not? By committing ourselves to join with others in protecting the integrity of God's creation, we are living out the promises of our baptism and participating in God's mission to restore all people and all creation to unity with God and each other in Christ.

Faithfully in the name of Christ and all creation,
The Episcopal Bishops of New England:

The Right Reverend Andrew D. Smith,
Bishop of Connecticut
The Right Reverend James E. Curry,
Bishop Suffragan of Connecticut
The Right Reverend Wilfrido Ramos-Orench,
Bishop Suffragan of Connecticut
The Right Reverend Chilton R. Knudsen,
Bishop of Maine
The Right Reverend M. Thomas Shaw, III, SSJE,
Bishop of Massachusetts
The Right Reverend Roy F. Cederholm, Jr.,
Bishop Suffragan of Massachusetts
The Right Reverend Gayle E. Harris,
Bishop Suffragan of Massachusetts
The Right Reverend Douglas E. Theuner,
Bishop of New Hampshire
The Right Reverend Geralyn Wolf,
Bishop of Rhode Island
The Right Reverend Thomas C. Ely,
Bishop of Vermont
The Right Reverend Gordon P. Scruton,
Bishop of Western Massachusetts

Sent to the Episcopal Churches of Province One on the Feast of the Presentation of Christ, 2003

(1) For an examination of the effects of global warming in New England, see New England Regional Assessment Group. 2001. Preparing for Climate Change: The Potential Consequences of Climate Variability and Change. New England Regional Overview, U.S. Global Change Research Program, 96 pp., University of New Hampshire (http://www.necci.sr.unh.edu/2001-NERA-report.htm

INTRODUCTION

This Study Guide explores ways to live out the promise of our baptism and participate in God's mission to restore all people and all creation to unity with God and each other in Christ. In support of the Pastoral Letter, it seeks to:

- Increase awareness and acknowledgement of the urgency of the planetary crisis in which we now live
- Develop cohesive groups that celebrate the gifts of creation and honor the sacredness of all of creation.
- Help these groups take action in ways that meaningfully demonstrate gratitude for the gifts of creation.

The environmental crisis is at heart a spiritual issue. This Study Guide is designed to assist each parish in forming a Discussion Circle, through which each participant can examine the roots of his or her connectedness with God's creation, both in scripture and in our Christian tradition. The core content explores some of the issues of greatest concern for New Englanders and for people of faith everywhere, for whom the degradation of the environment is an issue of justice for all.

THE DISCUSSION CIRCLE

The Discussion Circle approach aims at engaging people of faith in conversation around their core values and spiritual connections with God's creation. The process used to conduct the group seeks to model the same values we need in caring for creation: Respect, care, and affirming the value of each creature. The objective is NOT for each group to come to agreement or consensus on the issues raised in the Pastoral Letter. It is rather to create a fun, engaging, informative and empowering setting for congregants of our churches to deepen their personal understanding of what it means to "Serve Christ In All Creation." Through a shared dialogue, they will gain insights into how their fellow participants may interpret the same ideas in different ways.

The Discussion Circle process also seeks to motivate participants to take action in ways that have the most positive impacts in their spheres of influence: within their church community, their personal lives, neighborhoods and workplaces. The hope is that a core group of interested and willing people will form within each church, and that this group will continue to seek ways to celebrate the gifts of creation and honor the sacredness of all creation as integral to the work of the church.

This course consists of an Introductory Session, followed by four discussion sessions, each of which is supported by 3-7 pages of reading material.

The format is interactive and engages the participants in dialogue, small group discussion and reflection. The members of the group may take turns leading the discussion.

The study guide for each session includes a set of open questions for individual participants and the group to consider. There are more questions than can be considered during the time allotted. Therefore, the group will discuss only two or three. Participants are encouraged to think about their own response to as many questions as seem relevant to their concerns and faith. A list of further resources is also provided.

Groups can have 5-12 participants; it is best if each person gets a total of 8-15 minutes to speak in the course of each session, so larger groups should ideally have longer gatherings. It is perfectly fine to create more than one circle per parish, in order to accommodate more people and or different meeting schedules.

THE OPENING

The Opening is a 2-5 minute presentation or personal story by a group member, which provides both a transition from the prior activity to a purposeful focused discussion, and gives the presenter an opportunity to share something meaningful and personal with the group. For examples, a story might capture or speak to the presenter's:

Spiritual connection to nature and God's creation
Appreciation for nature
Attraction to simpler living
Concern for future generations
Connection to place, etc.

The Opening does not need to be a polished performance, nor should it present an unattainable standard of perfection. A simple, authentic opening will best encourage the participants to share of themselves.

Participants listen, not commenting on the offering, either during or afterwards, but rather merely affirming the value of what their fellow parish member has given them.

For each of the four Sessions, 1-2 people should offer Openings, so that everyone gets a chance to offer one at least once. At the end of each Session, the group can decide who will offer Openings next time.

All Openings are confidential. The teller owns the story.

THE SESSIONS

The Introductory Meeting: The Coordinator offers an Introductory Meeting one to two weeks before the start of the Discussion Circle. At the Introductory Meeting, those who wish to take part in the Discussion Circle can decide when to meet for each session, get a free copy of the Study Guide and decide who will facilitate each session. It is important that each person participate in each session in order to create a fun and meaningful experience for all; the people and the process are as important as the content. The sessions are designed to last a minimum of 45 minutes each, though 90 minutes per session will allow participants a much deeper exploration of the issues. Participants then take home their Study Guide and read the background material needed for the first session.

Session One explores the pastoral letter's urging that we act together to honor the goodness and sacredness of God's creation, and to acknowledge the urgency of the planetary crisis. It provides a theological, spiritual and moral foundation for exploring sustainable, faithful living in ways that acknowledge our responsibility to care for God's creation. At the end, participants remind each other to read the Session Two background material.

Session Two explores the pastoral letter's urging that we seek to understand and uproot the political, social and economic causes of environmental abuse, to repent of greed and waste, and seek simplicity of life. It looks at "the big picture" of global environmental and social trends, and our individual and collective place in that picture, as people living in New England. It starts by providing a basic understanding of how the situation got to be as it is, provides some guiding principles for sustainable action, and ends by mentioning ways some individuals and organizations are addressing key issues. At the end, participants choose which of three optional Session Three focus topics to read. [If the group wishes to explore them all, they must decide which order to read and discuss them, and plan two additional meeting times.]

Session Three explores the pastoral letter's urging that we pray and take action to restore a right relationship between humankind and creation, commit ourselves to energy conservation and the use of sustainable sources of energy, and to reduce, reuse and recycle. It gives participants a chance to explore three topics: global climate change, consumer choice, and/or environmental justice. Each Discussion Circle will collectively choose one of these topics. At each group's discretion, they may add additional Sessions so that each of these three important topics can be discussed.

Session Four explores the pastoral letter's urging to realize that through participation in community, public policy, and business decision-making, we have corporate as well as individual opportunities to practice environmental stewardship and justice. It is a time for participants to explore how they might act to become better stewards of all Creation, both as a community of faith and as individual members.

Follow up: If there is a desire to continue as a group, or to start a circle with a new set of people, the coordinator may choose to train a new coordinator or to continue. Ideally, the awareness of the sacredness of our relationship to God's creation awakened by this course will become common ground for all members of the Parish, Diocese, Church, and the world.

"IN THE BEGINNING, GOD CREATED…"

THE THEOLOGICAL AND BIBLICAL FOUNDATIONS
FOR AN ENVIRONMENTAL ETHIC

The Pastoral letter calls on us to

- *act together to honor the goodness and sacredness of God's creation*
- *acknowledge the urgency of the planetary crisis in which we now find ourselves*

OPENING PRAYERS

God of unchangeable power, when you fashioned the world the morning stars sang together and the host of heaven shouted for joy; open our eyes to the wonders of creation and teach us to see all things for good, to the honor of your glorious name; through Jesus Christ our Lord. Amen.

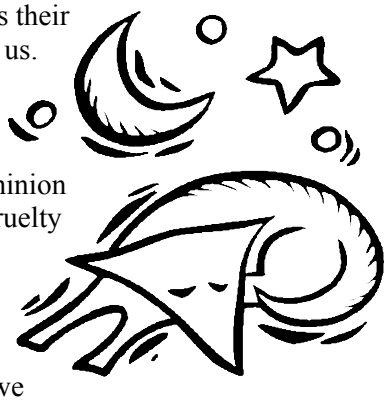
New Zealand Book of Common Prayer, p. 569

" Revelation comes in two volumes

-the Bible and nature."

-- Thomas Aquinas

O God, enlarge within us the sense of fellowship with all living things, our brothers the animals to whom thou gavest the earth as their home in common with us. We remember with shame that in the past we have exercised the high dominion of man with ruthless cruelty so that the voice of the earth, which should have gone up to thee in song, has been a groan of travail. May we realize that they live not for us alone but for themselves and for thee, and that they love the sweetness of life. Amen.



--Prayer of Compassion, by St. Basil the Great, 330-379

OPENING

Choose one of the following;

1 – SHARING OF SPECIAL PLACES
Think about a place that is special or sacred to you. It doesn't have to be a "wild" place. It could be some place in your home or community. What would you like to share about your sacred space?

2 -- ECO STORY
(adapted from the NWEI mentor's manual)
This is a 2-5 minute presentation by a group member which: 1) provides a transition from the prior activity to a purposeful, focused discussion, 2) gives the presenter an opportunity to share something meaningful and personal with the group. For examples, a story might capture or speak to the presenter's:

Spiritual connection to nature and God's creation
Concern about an environmental hazard in your home or neighborhood
Appreciation for nature
Attraction to simpler living
Concern for future generations
Connection to place, etc.

" God writes the Gospel,

not in the bible alone,

but also on trees, and flowers

and the clouds and stars."

-- Martin Luther

THE PASTORAL LETTER

Each member of the group will need to have a copy of the Pastoral Letter. The impact of this letter is greatest when read aloud. If the group has not had the opportunity to "hear" the letter, then read it now, perhaps going around the group so that those who choose may read sections of it.

Ask members of the group to point out parts of the letter that had the greatest impact on them and that they would like to discuss. Indicate these selections on a flip chart.

After all have had a chance to respond, try to group the responses as follows:

Scriptural reference:
In what ways do the scriptural passages indicate that God cares for all of creation?
How would you interpret our role as humans in the created order?

Theological reference:
In what ways have Christian teachings influenced our relationship with the earth?
How has our relationship with the earth affected our fellow humans?
In what ways do you envision that this relationship might change?

Environmental issues
What evidence of these issues have you seen in your own life? How do you feel about it?
Have you thought about these issues in relation to your Christian faith before? What conclusions have you come to?

Choose one question to discuss in each category. If time allows, have each person answer each question going around the circle. With a large group, break out into sub-groups of 3-5 people each and allow 3-5 minutes per person to address all three questions If time allows before the Closing Prayers, have each group share some of its insights with the whole group.

****Note. It will be counter-productive to group cohesion and to understanding deeply the meaning of the Pastoral Letter if participants try to move towards taking action before Session #4. The goal of the first three sessions is to deepen our understanding of how our faith speaks to us about our relationship with God's Creation.***

Before closing prayers, the facilitator reminds the group to read the "readings," and the "core content" before the next session. At this time, the coordinator should ask for volunteers to do openings and to facilitate the next meeting. As a transition to the closing prayers, the group may wish to offer individual thanksgivings, concerns and petitions.

Scripture and tradition remind us
that the whole earth is filled with
the glory of God.
Here in our beloved New England
we perceive that glory in wild forests
and open fields, in clear lakes
and rocky seashores,
in mountains, dunes,
and rolling hills.

-- From the Pastoral Letter

CLOSING PRAYERS

Creator God, you make all things
and weave them together in an intricate tapestry of life.
Teach us to respect the fragile balance of life and to care for all the gifts of your creation.
Guide by your wisdom those who have power and authority,
that, by the decisions they make, life may be cherished and a good and fruitful Earth may continue to show your glory and sing your praises.

(From the National Council of Churches [NCC] Earth Day Sunday 2001 resource packet.)

Litany

to be read responsively

O Lord, how manifold are your works!
In wisdom you have made them all; the earth is full of your creatures. (*Psalm 104:24)*
God saw everything that he had made,
and indeed, it was very good. (*Gen. 1:31)*
The earth is the Lord's and all that is in it, the world, and those who live in it;
for he has founded it on the seas, and established it on the rivers. (*Psalm 24:1-2*)
He covers the heavens with clouds, prepares rain for the earth, makes grass grow on the hills.
He gives to the animals their food, and to the young ravens when they cry. (*Psalm 147:8-9)*
Who has measured the waters in the hollow of his hand and marked off the heavens with a span,
enclosed the dust of the earth in a measure, and weighed the mountains in scales and the hills in a balance? *(Isa. 40:12)*
I made the earth, and created humankind upon it;
it was my hands that stretched out the heavens, and I commanded all their host. (*Isa. 45:12)*
I will open rivers on the bare heights, and fountains in the midst of the valleys;
I will make the wilderness a pool of water, and the dry land springs of water.
I will put in the wilderness the cedar, the acacia, the myrtle, and the olive;
I will set in the desert the cypress, the plane and the pine together,
so that all may see and know, all may consider and understand,
that the hand of the Lord has done this, the Holy One of Israel has created it. (*Isa. 41:18-20)*
The wild animals will honor me, the jackals and the ostriches;
for I give water in the wilderness, rivers in the desert. ***(Isa. 43:20)***
Shower, O heavens, from above, and let the skies rain down righteousness;
let the earth open, that salvation may spring up, and let it cause righteousness to sprout up also; I the Lord have created it. (*Isa. 45:8*)
For you shall go out in joy, and be led back in peace;
the mountains and the hills before you shall burst into song, and all the trees of the field shall clap their hands. *(Isa. 55:12)*
Praise the Lord from the earth, you sea monsters and all deeps,
fire and hail, snow and frost, stormy wind fulfilling his command!
Mountains and all hills, fruit trees and all cedars!
Wild animals and cattle, creeping things and flying birds! (*Psalm 148:7-10*)
Then I heard every creature in heaven and on earth and under the earth and in the sea, and all that is in them, singing,
To the one seated on the throne and to the Lamb be blessing and honor and glory and might forever and ever! *(Rev. 5:13*

SESSION ONE

SUPPLEMENTAL MATERIAL

A: BASIC BIBLICAL DISCUSSION
-- for biblically based churches or groups without much background in environmental issues

> *'With Martin Luther, we know that "God writes the Gospel, not in the Bible alone, but also on trees, and the flowers and the clouds and stars." With Thomas Aquinas, we affirm that "Revelation comes in two volumes - the Bible and nature." The world is God's creation, and God delights in it ("God saw everything that [God] had made, and indeed, it was very good," Genesis 1:31; "The heavens declare the glory of God, and the firmament shows [God's] handiwork," Psalm 19:1). The land and the rivers, the air and the sea belong to God, not to human beings ("The earth is the Lord's and all that is in it," Psalm 24:1). We are part of the created order, not separate from it, and our first calling by God is to be the caretakers of creation (Genesis 2:4b-8, 15). Reckless destruction of nature is a sign of estrangement from God. ("There is . . . no knowledge of God in the land . . . Therefore the land mourns, and all who live in it languish; together with the wild animals and the birds of the air, even the fish of the sea are perishing," Hosea 4:1b, 3; "Hurt not the earth, neither the sea nor the trees," Revelation 7:3).'*
>
> *-- from the Pastoral Letter*

1. The Bible is full of verses about God as the Creator of the world. The world is the Lord's and he is its ultimate ruler and cares for all of creation, not just humans. The wonders of nature are beyond our understanding and all creation gives praise to God. We are to be good stewards of this marvelous gift. Look at and talk about one or more of the following verses:

Jeremiah 10:12-13 -- It is God who made the earth by his power.
Romans 1:20 -- Ever since the creation of the world God's nature and power have been seen through creation

(See also: the creation stories in Genesis 1-3; Psalms 8, 24, 29, 65, 147; Proverbs 3:19-20, 8:22-31; Isaiah 66:1-2; Jeremiah 27:5; John 1:1-18; Acts 17:24-28; Hebrews 11:3; Revelation 4:11)

Job 12:7-10 (The animals will teach you about God's creation) and 36:26-42:6, especially chapter 39 – We cannot understand the wonders of creation.

(See also: Psalm 104, Proverbs 6:6 and 30:24-31; Isaiah 45:9-12; Romans 9:20-21, I Corinthians 37-41)

Psalm 84 – The sparrow finds a home in God's temple.
Jeremiah 32:27 – God is the God of all flesh.

Psalm 96 – The trees of the forest shall sing
Psalm 148 – Let the whole earth praise the Lord
Revelation 5:13 -- Every creature in heaven and on earth and under the earth and in the sea sings praise to the Lamb

Deuteronomy 20:19-20 -- Do not destroy trees
Luke 12:41-48 -- We are to be good stewards.

(See also: Deuteronomy 22:6-7; Matthew 25:14-30; Luke 16:10-13; Hebrews 11:7)

'Christianity offers an imperiled world the conviction that God's creation is good, and that God in Christ has redeemed not only the individual human soul, but also the whole of creation. In Christ, "all the fullness of God was pleased to dwell, and through him God was pleased to reconcile to himself all things, whether on earth or in heaven, making peace by the blood of his cross" (Colossians 1:19-20). Creation is thus made new (Revelation 21:5).'

-- from the Pastoral Letter

2. In the Bible, God's redemptive power is shown not only to individuals but to creation as a whole. Over and over again, human sin degrades the earth and God's power restores it. How can we become, instead of destroyers of creation, co-creators and co-restorers with God? Look at some of these verses. Notice that God is interested not only in unspoiled wilderness but in responsible cultivation that fosters life and health for all creatures.

Isaiah 24 – a wrenching description of environmental apocalypse.
Isaiah 49:8—In a day of salvation I have helped you…to restore the land
Ezek. 36:1-11 -- Ezekiel's prophecy to the land
Matthew 24:3-28 – What about these signs are features of our times? What are features of every time before and since?

(See also: Job 14:19; Jeremiah 4:23-28; Jeremiah 51:42-43; Zephaniah 1:2-3, 3:11-13; Zechariah 11:1-3; Matthew 16:1-4, II Corinthians 5:17)

'Just as God's salvation encompasses all creation, so too does Jesus call us to love our neighbors as ourselves. Who is our neighbor? When Jesus was asked that question, he responded with the story of the Good Samaritan (Luke 10:29-37). Today, the natural world is under assault, forests are being stripped and oceans plundered, natural resources are being exhausted and entire species killed. Today, the world is being stripped, beaten, and left half dead. Is it not possible to recognize all creation as our "neighbor"?'

-- from the Pastoral Letter

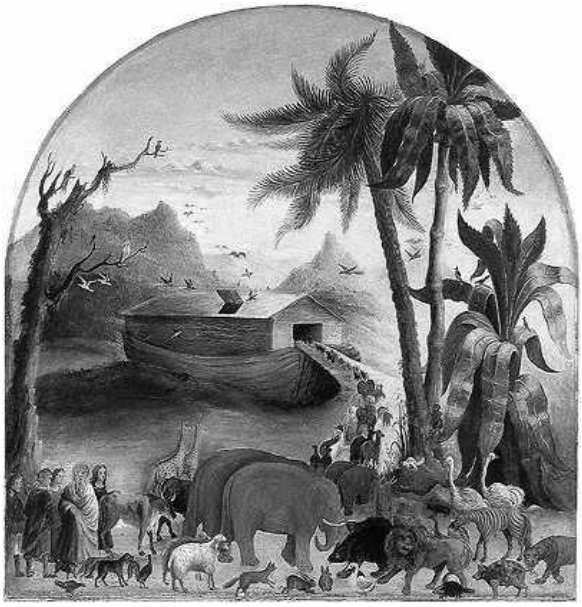
3.. Read the story of the Good Samaritan. How can we treat all creation as our neighbor? Do we know someone who is a "Samaritan" to nature? Who are the robbers in the story, who cause the damage? Who are the priest and Levite, who pass by and do not help? We ask these questions not to demonize those who do these things, but to prayerfully assess the situation and to discern how we can be, not destructive robbers or passive Levites, but Samaritans, restoring and renewing our neighbors in God's creation.

> *The poor, the marginalized, and the least powerful of our human neighbors are those who suffer most from illness and pollution caused by environmental degradation. Generators, incinerators, and waste disposal facilities are concentrated in impoverished neighborhoods; children in our inner cities suffer alarming rates of asthma; overemphasis on the use of private vehicles deprives the poor of transportation. Exploitation of the poor is closely linked to exploitation of the earth, and our quest for social justice and economic sustainability must rest on a foundation of ecological stability.*
>
> *-- from the Pastoral Letter*

In a world where everything is interconnected, this is not a matter of mere charity; if we strip, beat, and plunder creation, we will suffer from disease, extreme weather, poisons in the air, water and soil, and a degraded and reduced resource base -- water, soil, forests, energy -- from which to live.

B: ADVANCED BIBLICAL DISCUSSION

-- for socially/environmentally active congregations who may be wondering what the bible has to say about it or want to talk about more complex or difficult issues



1. Read Genesis 8:13-9:17 (the covenant with Noah). This is an extremely rich text with both positive and negative possibilities for an environmental theology. The ark is often used today as a symbol for species conservation, and it is important to emphasize that the covenant with Noah is a covenant with every living creature (9:9-17) and with the earth (9:13). Nevertheless, questions remain. Consider one or more of the following:

a) God commands the animals to be fruitful and multiply (8:17) as well as people. In our day, because of the huge size of the human population, many species are at immediate risk of extinction because we have taken over their habitat. Are we required to stop being so fruitful and multiplying so fast, so that other species may be as abundant as God has asked them to be?

b) In a famous phrase (Genesis 8:22), God declares that "As long as the earth endures, seedtime and harvest, cold and heat, summer and winter, day and night, shall not cease." Yet humans are now knowingly altering the earth's climate by our greenhouse gas emissions. Are we thus breaking Noah's covenant? What are the consequences?

c) Noah is told "The fear and dread of you shall rest on every animal of the earth ... into your hand they are delivered." (9:2) He is given "every moving thing that lives" for food (9:3). Here the Bible acknowledges the reality that humans and other animals are not all vegetarians as they were before the Fall (Genesis 1:29-30). How do we interpret these verses in an age when all too often animals go in fear of us and the fate of whole species is entirely in our hands, usually not for good? How can we be responsible about meat eating when most meat is raised using huge amounts of poisonous chemicals and drugs, in ways that degrade land and waste water, and grain that could feed the hungry feeds livestock?

'One of the most daunting challenges we face is global climate change. Many scientists agree that if we burn fossil fuels at expected rates, global warming caused by human activities could raise worldwide average temperatures between 3 and 11 degrees Fahrenheit in this century. In New England, climate change may cause flooding in coastal areas, reduce the quality of our region's fresh water, imperil agriculture, and increase the outbreaks of infectious disease. Within this century, New England may lose its maple, birch, and beech trees. We face the loss of our spectacular fall colors and the end of fall-foliage tourism, as well as the destruction of our region's maple sugar industry.' (1)

-- from the Pastoral Letter

2. Read Matthew 14:13-21. Christians who use goods at a high level are often asked in stewardship campaigns to cultivate a "theology of abundance". While this presents the idea of cutting down in a way that's easier to accept, there really is more to the idea than that. It is offered as an alternative to a "theology of scarcity," and intended to address our attitude toward God more than our attitude toward possessions. It encourages us to be generous with our goods, trusting that God will provide for us, rather than hoard against a "rainy day". Yet when generosity becomes profligacy with goods that belong not to us but to all of humanity; when others are deprived by our excessive use of resources; and when trust in Providence is used as an excuse for short-sighted exploitation, we need to reconsider this stance. How do we cultivate a theology of abundance in a world with very real and fast-approaching limits? Do we need to turn away from this story? Where is the line between planning for sustainability and being insufficiently generous right now? Or if we really believed that God would provide, would we want less in the first place -- resulting in enough to go around?

C: THEOLOGICAL DISCUSSION

-- for congregations comfortable talking abstractly about theology

1. The Church's doctrine of original sin has been unpopular at various times in Western European history, especially during the period of the Renaissance and Enlightenment, when humanism and the idea of human perfectibility were popular. In essence, the doctrine teaches that there is a flaw in humanity, which is common to all of humanity equally and was brought about by our arrogant rebellion against God. This flaw causes us to behave in selfish, unhealthy, and eventually self-defeating ways. Though we can and must work as hard as we can to overcome this flaw in our nature, only Christ can rescue us from it completely. Though all creation is fallen, sin is specific to humans; animals in their natural state are not capable of sin. Modern environmental studies, in its turn, teaches us that we are just as dependent as the rest of animal and plant life on the functioning of healthy ecosystems, and yet we persist in behaving as though we were somehow exempt from physical and biological laws and can manipulate nature to serve us. This results in a damaged natural world that is less capable of supporting life. What do these two views of human nature have in common? How are they different? If we see our constant inclination to abuse nature as a manifestation of original sin, does it help or hinder our efforts to care for God's creation?

> '*We regret Christian teachings that claim or imply that human beings have divine sanction to destroy God's creation.'*
>
> *-- from the Pastoral Letter*

2. Much damage has been done by crude interpretations of Genesis 1:28. How would we interpret our charge to "have dominion over ... every living thing" if we did so in light of the Incarnation? God has power and dominion over all of creation in a far more total way than we; when God became human, how did he express that power and dominion? (Read any one of the Passion stories in the Gospels if your memory needs refreshing!) Is there any reason why we should imagine that our dominion over creation involves a less complete offering of our life as a sacrifice for its good? (Notice also, of course, that Gen. 1:28 comes before the fall; compare Gen. 3:17-19 for a more realistic assessment of fallen humanity's place in the cosmos.)

> *'Lest we experience despair, lest we feel the hopeless conviction that it is too late to change anything, too late to turn this around, we must root ourselves in the deepest convictions of our faith. We put our trust in a God who loves every inch of creation and whose covenant with Creation can never be broken ("I will . . . remember the everlasting covenant between God and every living creature of all flesh that is on the earth," Genesis 9:16). We share in Christ's crucifixion, letting ourselves feel and mourn the wounds of Creation. We share in Christ's resurrection, bearing witness to the Christ who bursts out of the tomb, who proclaims that life, not death, has the last word, and who gives us power to roll away the stone. We receive the Holy Spirit, source of all truth, who sends forth faithful stewards of God's creation. We nourish ourselves at the Eucharistic table, where Christ gives himself to us in the natural elements of bread and wine, and restores our connections not only with God and one another, but also with the whole web of creation.'*
>
> *-- from the Pastoral Letter*

GOD'S EARTH AND ALL GOD'S CREATURES IN PERIL

The Pastoral letter calls on us to:

- *"To seek to understand and uproot the political, social, and economic causes of environmental abuse*
- *"To repent of greed and waste, and to seek simplicity of life."*

OPENING PRAYERS

Choose one or two of the following prayers:

Almighty and gracious Father, we give you thanks for the fruits of the earth in their season and for the labors of those who harvest them. Make us, we pray, faithful stewards of your great bounty, for the provision of our necessities and the relief of all who are in need, to the glory of your Name; through Jesus Christ our Lord, who lives and reigns with you and the Holy Spirit, one God, now and for ever. *Amen.*

--Collect for Thanksgiving Day, BCP p. 246)

Almighty God, you have called us to tend and keep the garden of your creation.
Give us wisdom and reverence for all your plants and animals who share this planet with us and whose lives make possible our own. Help us to remember that they too love the sweetness of life and join with us in giving you praise.

--From the National Council of Churches [NCC] Earth Day Sunday 2001 resource packet.)

The earth is at the same time mother,
She is mother of all that is natural, mother of all that is human.
She is the mother of all, for contained in her are the seeds of all.
The earth of humankind contains all moistness, all verdancy, all germinating power.
It is in so many ways fruitful.
All creation comes from it. Yet it forms not only the basic raw material for humankind, but also the substance of the incarnation of God's son.

--Hildegard von Bingen.

From: Interfaith Declarations and Worship Observance Resources; The North American Conference on Religion and Ecology; 5 Thomas Circle, NW, Washington, DC 20005

OPENING

(Described in Session One and in the Introduction)

DISCUSSION

Pick one or two questions from the lists below, and have each participant give their answer.

"To seek to understand and uproot the political, social, and economic causes of environmental abuse"

What do you feel when you pay attention to the "big picture?"

What specific political, social, and economic causes of environmental damage do you see at work in your community and life?

How do I, my congregation and our society differentiate or confuse needs and wants?

What are some specific examples you have seen in your household, community, workplace and/or parish of people meeting human needs in ways that Serve Christ in All Creation?

What political, social and economic factors could be changed to make it easier for each of us to conserve and even restore our "corner" of the world?

If it's taken several hundred years for the industrial revolution to bring us to the benefits and challenges we currently have, and the rate of change is accelerating, what's a good time scale to think about for "uproot[ing] the political, social, and economic causes of environmental abuse?"

When and how might you begin to see some changes and/or know deep change is under way?

When in the past have you seen or heard of change on this scale? What do those circumstances tell you?

Does the scale of these problems feel too large to contemplate? What can sustain my mind and spirit in the face of such large problems?

How might my faith help me find the strength and wisdom to confront the difficult issues we now face?

"To repent of greed and waste, and to seek simplicity of life."

Can you please describe --in detail-- a time when you felt a need to simplify your life?

How might you create (or strengthen) a lifestyle which is outwardly simple while remaining inwardly rich?

What do you do to remind yourself of what's most important to you?

How do you distinguish between needs and luxuries in your life?

If almost every dollar I spend:
demands the earth give up certain materials, products and eco-system services
has negative near-term, downstream impacts
may create problems for plants, animals and people yet unborn,
what does my faith call me to ask of myself, when I'm considering where and how I spend money?

Many worthy values call upon us to choose meaning over comfort, but it's not always that simple. What factors in your own life and household make it harder? Which factors make it easier?

What activities or people boost your energy? Which leave you feeling drained? Where do you feel fully engaged?

Which commitments take time but are no longer fulfilling?

After the discussion and before closing prayers, choose one of the three optional focus topics – Global climate change, Environmental justice, Consumer choices for Session #3, to be read for the next meeting. At this time, the coordinator should ask for volunteers to do openings and to facilitate the next meeting.

CLOSING PRAYERS

Litany
to be read responsively

If you will only heed his every commandment that I am commanding you today,
loving the Lord your God, and serving him with all your heart and with all your soul,
then he will give the rain for your land in its season, the early rain and the later rain,
and you will gather in your grain, your wine, and your oil; and he will give grass in your fields for your livestock, and you will eat your fill. (Deut. 11:13-14)

Is it not enough for you to feed on the good pasture, but you must tread down with your feet the rest of your pasture?
When you drink of clean water, must you foul the rest with your feet?
And must my sheep eat what you have trodden with your feet, and drink what you
have fouled with your feet? (Ezek. 34:18-19)
Ah, you who join house to house, who add field to field, until there is room for no one but you, and you are left to live alone in the midst of the land! (Isa. 5:8)
Therefore the land mourns, and all who live in it languish;
together with the wild animals and the birds of the air, even the fish of the sea are perishing. (Hos. 4:3)
The Spirit of the Lord is upon me, because he has anointed me to bring good news to the poor,
to proclaim the year of the Lord's favor, a sabbath of rest for the land. (Luke 4:19, Lev. 25:4)
The farmer waits for the precious crop from the earth, being patient with it until it receives the early and the late rains. (James 5:7)
Turn from worthless things to the living God, who made the heaven and the earth and the sea and all that is in them.
He has not left himself without a witness in doing good,
giving you rains from heaven and fruitful seasons, and filling you with food and your hearts with joy.
(Acts 14:15, 17)
Whoever plows should plow in hope, and whoever threshes should thresh in hope of a share in the crop.
(I Cor. 9:10)
And the one who was seated on the throne said, "See, I am making all things new." (Rev. 21:5)
The wilderness and the dry land shall be glad, the desert shall rejoice and blossom;
like the crocus it shall blossom abundantly, and rejoice with joy and singing. (Isa. 35:1-2)
I will make with them a covenant of peace and banish wild animals from the land, so that they may live in the wild and sleep in the woods securely.
I will make them and the region around my hill a blessing; and I will send down the showers in their season; they shall be showers of blessing.
The trees of the field shall yield their fruit, and the earth shall yield its increase. They shall be secure on their soil;
they shall live in safety, and no one shall make them afraid.
I will provide for them a splendid vegetation so that they shall no more be consumed with hunger in the land.
You are my sheep, the sheep of my pasture, and I am your God, says the Lord God. (Ezek. 34:25-29, 31)

Prayer
Creator God, you make all things and weave them together in an intricate tapestry of life, which becomes the ground on which humans make their lives..
Teach us to remember the vulnerability of the created order and to care for our sisters and brothers and all the gifts of your creation.
Guide by your wisdom those leading ordinary lives and those who have power and authority, that, by the decisions they make, life may be cherished and a good and fruitful Earth may continue to show your glory and sing your praises.

-- based on a prayer in the National Council of Churches [NCC] Earth Day Sunday 2001 resource packet

READINGS

Please read either section A or B and then section C before the group meets, and reflect on the final question.

A

Imagine: If the Earth were only a few feet in diameter, floating a few feet above a field somewhere, people would come from everywhere to marvel at it. People would walk around, marveling at its big pools of water, its little pools and the water flowing between the pools. People would marvel at deep rich soil on it, and they would marvel at the very thin layer of gas surrounding it and the water suspended in the gas. The people would marvel at the creatures walking around the surface of the ball, and at the creatures in the water. The people would declare it as sacred because it was the only one and they would protect it so that it would not be hurt.

The ball would be the greatest wonder known, and people would come to pray to it, to be healed, to gain knowledge, to know beauty and to wonder how it could be. People would love it, and defend it with their lives because they would somehow know that their lives, their own roundness, could be nothing without it.

If the Earth were only a few feet in diameter.
-Miriam Therese MacGillis, Genesis Farm

B

An excerpt from The Universe is a Green Dragon by Brian Swimme.
In this excerpt there are two fictitious characters, Thomas and a Youth. Swimme chose to name one speaker Thomas "to honor Thomas Berry and the cosmological tradition he celebrates," He created the character of the Youth "to remind us that the human species is the youngest, freshest , most immature, newest species of all the advanced life forms in the planet."

Youth: What about my future? What difference will it make for me?

Thomas: To begin with, you'll have to embrace your creative potential. The universe has unfolded to this point. It has poured into you the creative powers necessary for its further development. The journey of the cosmos depends on those creatures and elements existing now, you among them. For the unfolding of the universe, your creativity is as essential as the creativity inherent in the fireball.

Youth: How can I learn about my creativity?

Thomas: Consider the creativity acting throughout the universe. Look there, and you will begin to understand how the same creative activity gathers you into its work as well.

The fireball was a cauldron of creativity. In it were created all the elementary particles of the universe. All that exists on Earth exists only through the elementary particles that emerged in that first epoch of the universe's unfolding. After the fireball, stars and galaxies were created. We must realize that the creation of a galaxy is one stupendous activity. Could we manage that? Yet galaxies were created by the hundred billion, each with its hundred billion stars. And all of it dances, the stars swirling about each other,

exploding, creating new stars, holding each other in the silence of the gravitational embrace. And, these stupendously complex systems of being simply leapt into existence. When we reflect on the creativity inherent in universe, we are overwhelmed both by its enormity and by its seeming effortlessness.

To learn about creativity, we must begin to understand the creativity of the Earth. We know of no other planet with Earth's creative power. I speak now of the Earth as a whole, as a creative entity. Earth created the land masses, the mountain ranges, the atmosphere. The moon and Mercury created mountain ranges, but their creativity ended long ago. Mars, too, created mountains and a thick crust and atmosphere, but its significant creative evolution has ceased. The Earth, on the other hand, will continue to create for billions of years. Jupiter certainly created an atmosphere, but Jupiter will never be able to bring forth a continent; its great mass will remain gaseous far into the future. Only on Earth were the creative dynamics able to fashion such diversity, even on this elemental realm. Earth created the oceans, a stupendous feat. We have yet to find another ocean in this galaxy, another lake, or river. We know of no others besides our own.

Youth: None?

Thomas: We found water vapor, and ice, but that is all. The creation of ice is a profound enough manifestation of creativity; there was no ice in the first billions of years of the universe. Or to have created water vapor, as did Venus, certainly reveals creative dynamics at work. But to have created the oceans and to have maintained them for four billion years is an accomplishment of which only Earth can boast. For all we know, there may be no other planet that has shown such creative power. An alarming thought perhaps, but one that must be considered seriously until we have evidence indicating otherwise.

Youth: Oceans seem so ordinary.

Thomas: Yes, they do, but that only reflects the ordinariness of our minds. When we take the whole universe as our fundamental frame of reference, we begin to appreciate the cosmic significance of running water. Only by establishing ourselves within the unfolding cosmos as a whole can we begin to discover the meaning and significance of ordinary things.

Earth was a cauldron of chemical and elemental creativity, fashioning ever more complex forms in combinations until life burst forth into the oceans and spread across the continents, covering the entire planet. This creativity advanced until the flowers bloomed on every continent, then advanced further until the vision of the flowers and all beauty could be deeply felt and appreciated. We are the latest, the most recent, the youngest extravagance of this stupendously creative Earth.

Youth: Are we the last?

Thomas: We haven't even begun! How can you speak of an ending? We are only just starting out on the human venture, and are only too keenly aware of our immaturity. Even this discussion reveals the way in which the human self-reflective mind continues to unfold. Only minutes ago, you are unaware of the primeval fireball. The entire species was unaware of the fireball's light for millions of years. Do you see? The universe continues to unfold, continues to reveal itself to itself through human awareness.

-Briane Swimme, *The Universe is a Green Dragon*

C

In the first half of the 20th century, Albert Einstein deduced and Edwin Hubble illuminated this story of the universe from a scientific discipline. They demonstrate that the universe is expanding, and that its rate of expansion indicates that the universe began approximately 15 billion years ago… These stunning scientific discoveries have many profound implications, which slowly dawn on the wider public.

> "Most central of all, perhaps, is our knowledge that in some sense the structures of the universe were "aimed at." The structures are not entirely accidental in the sense of being the result of random collisions in an otherwise indifferent universe. To get atoms in the universe to bounce together haphazardly to form a single molecule of an amino acid would require more time than has existed since the beginning, even a hundred times more that fifteen billion years. Yet amino acids formed not only on the planet Earth, but throughout the Milky Way galaxy."
>
> -Briane Swimme and Thomas Berry "The Universe Story"

In the late 20th century, cosmological mathematician Swimme and theologian Berry and others make the case that from the primordial flaring forth to the evolution of life on Earth, the processes which endure are those that produce the most efficient use of energy, i.e., those that produce complexity. The Universe is thus seen as a creative force favoring the growth of diverse systems interrelated with other diverse systems. Human beings, who embody this complexity, sometimes call this quality of the universe beauty.

This same self-conscious species, *Homo sapiens sapiens* (one who knows that he/she knows), has a primary attribute linked to the Universe story. Humans are…supremely designed to reflect in awe and wonder and, as Swimme puts it, "be profoundly stunned" at the Universe in which they find themselves. Many theologians, scientists and lay people begin to assert that we most fully fulfill our role in the Universe when we do this, when we act as parts of creation reflecting on –and caring for-- the wonders of creation.

Previously, the only forces shaping the earth were geological, air, water, and then biological. As the 21st century dawns --with our most recent, rapid doubling of human population, its consumption and technology-- the "humansphere" has become a fifth force capable of producing worldwide change. Unintentionally, we are terminating other species, changing the climate, generating toxic waste, destroying topsoil, and polluting water and air as if our impacts are limited to the micro-level. We are learning now --suddenly-- that we are so many and so powerful, that we are affecting the whole planet.

The world has seen three great epochs of life, separated from one another by the mass extinction of species - the Paleozoic, the Mesozoic, and the Cenozoic. As we enter the next epoch, what cosmology will shape human culture, values, and behavior? Will it be what some scientists call, from a place of deep hope, the Ecozoic? Will we change our direction to care for All Creation?

Stay tuned…

-- Judy Kramer, permission pending

*****

What do you feel when you pay attention to the "big picture" of Creation and the Story of The Universe? What thoughts surface?

CORE CONTENT

This material is to be read before the class meets.
Please consider which of the study questions you might want to discuss as a group, and/or simply reflect upon by yourself.

Understanding the loss of productivity and biodiversity of natural systems

How does human activity fit into this picture? Consider these five basic facts:

1. Human population has skyrocketed. Many of us have seen it double from 3 to 6 billion in our lifetimes. (i)

2. Human consumption of energy and materials has grown much faster than the population. Since the 1940s, the US alone has mined and used more material and energy than all previous societies combined, and desire for a similar standard of living has spread worldwide. Very conservatively estimated, if everyone were to live as most people in the U.S. do, we'd need at least 2 more planets like Earth. (ii)

3.Technology accelerates the disruption of ecosystems by enabling societies to process more material and energy in less time.

Thus:

Growing Population X Growing Consumption X Accelerating Technology
= Ever Greater Impact on the Earth.[iii]

4. While there are local exceptions, scientists agree that virtually every class of eco-system on the planet is in trouble: i.e., oceans, forests, rivers, grasslands, and wetlands. Biologists agree that, as a result of human activity, the Earth is seeing its greatest rate of extinction in 65 million years, since the dinosaurs died off. In a scenario unimaginable just a century ago, we are changing the very climate of the planet and, if current trends continue, threatening human existence. [iv]

5. The economic systems and policies that have brought great benefits to many have left the majority of the world's people poorer in natural resources, indigenous culture and local control. Political unrest, disenfranchisement and terrorism are growing worldwide as social, ecological and economic disruptions spread.[v]

******

What specific political, social, and economic causes of social and environmental damage do you see at work in your community?

Connections

When we open a newspaper and read separate articles about terrorism, school system budget cuts, climate change and asthma, we can think about these problems with our unique human ability of "systems thinking." If we try, we can see how all these are connected. For example:

A compartmentalized, piece meal view sees:	**Looking for root causes,**	**A global systems thinking view sees:**
Global climate change Air pollution Asthma	→	Ever-increasing use of materials from the Earth's crust: fossil fuels, metals, and minerals.
Cancer Learning disabilities Mutations	→	Ever-increasing use of persistent and toxic synthetic materials.
Species extinction Deforestation Declining water quantity and quality Declining quality of life	→	Ever-increasing degradation of the productivity and biodiversity of natural systems
Rising gap between rich and poor Crime, violence and abuse Isolation Political unrest	→	Ever-increasing failure to equitably meet basic human needs worldwide.

As systems thinkers, we can see how each item of the table above is connected to all the others.

*****

What connections such as these can you see in your home, work, and community? What political, social and economic factors could be changed to make it easier for each of us to conserve and even restore our corner of the world?

The most harmful consumer activities

The Union of Concerned Scientists, a respected scientific non-profit organization, has concluded that the following six consumer activities have a disproportionately large impact on our national environmental problems:

- Driving cars and light trucks (this has by far the largest negative impact)
- Eating meat and poultry
- Heating, hot water, air conditioning
- Appliances and lighting
- Home construction
- Water and sewage

*****

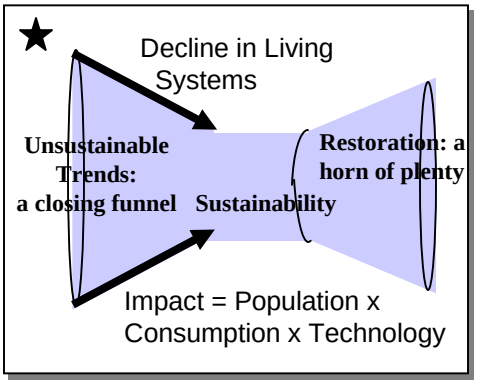
Knowing this, can you imagine making changes to create a lifestyle that is outwardly simple, while remaining inwardly rich?

[Session Three will explore in more detail where you can have the greatest positive impact by adjusting your individual daily habits and purchases.]

A 10 Minute Overview of Sustainability

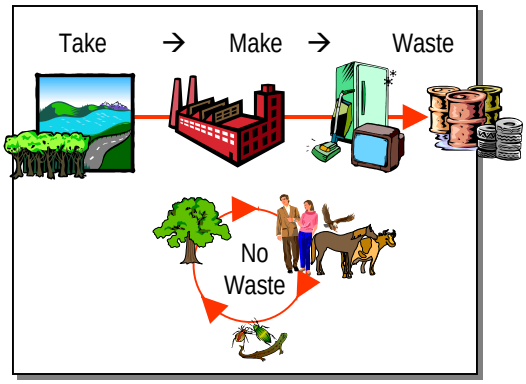
www.ssne.org

Sustainable Step New England



The Story of Our Time

We live in a moment unprecedented in history -in 30 years human population has doubled from 3 to 6 billion, and consumption has soared. Our mind sets, economic systems, and technologies have not yet caught up with the implications of this huge shift, and are driving two linked, converging trends that cannot be sustained: sharply increasing environmental impacts are causing declines in the health and capacity of virtually all ecosystems, from human communities to forests and coral reefs. How can we, as people of faith, help put humanity on sustainable path? By asking questions and acting in ways that allow ALL creatures' needs to be met. With intention and action working in concert with God's wondrous creation, Earth's system's can again become a horn of plenty. We can serve Christ in all creation.



Industrial vs. Natural Systems

Our industrial systems evolved to meet human needs at a time when our impact on the earth was much smaller. Now, with our call to stewardship of the planet comes greater responsibility. We must examine our assumptions. Industrial systems operate in a linear way. We take raw materials, make products and services, and ultimately turn over 90% of the original mined raw material and energy into unusable waste, which then spreads. By contrast, nature works in cycles so "waste" from one part of the system is nutrient for another. Nature has functioned cyclically for 3.5 billion years, generating increasing resiliency, diversity and productivity. What if we follow creation's model? This leads to a key question: Why does nature work in cycles?

Nothing disappears: there's no "away."

Everything spreads

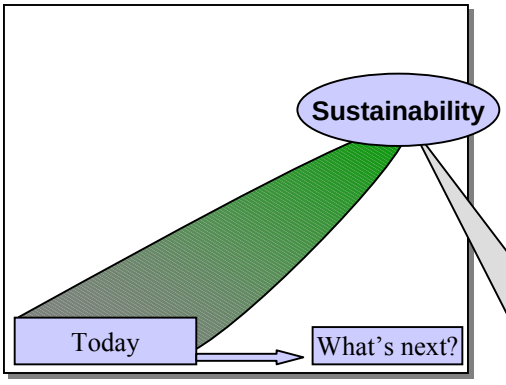
Sun-driven processes restore quality

Basic Scientific Laws; Why Our Actions Matter

Nature works in cycles because it's constrained by laws of physics. Since we can't lobby to change these laws, we need to understand their implications:

- Nothing disappears. The earth is a closed system. Waste we throw "away" stays in the system because matter is conserved.
- Everything spreads. Entropy guarantees that contaminants will always disperse, and will often build up in our bodies.
- Consumption degrades the usefulness of energy & materials, which only sun-driven processes restore by recreating concentration, structure, purity & value (e.g., quality of food, forests, soil, oceans, metals, minerals, & fuels).

How can we make changes in our workplaces, communities, parish and individual practices to Serve All Creation?



Guiding Principles for Serving Christ in All Creation

Four principles help define what is sustainable, based on these basic scientific laws. The principles can be used as a compass to guide our decisions. If an activity is fully aligned with them, it can be sustained indefinitely without degrading natural and social systems. Strategic questions based on the principles (see questions and examples, below) can help us act in ways that show we care about all of God's wondrous, awe-inspiring creation.

In a sustainable society, nature's functions and diversity are not subject to systematically increasing:

1. Concentrations of substances extracted from the earth's crust
2. Concentrations of persistent substances produced by society
3. Degradation by over-harvesting or other physical means
4. And in that society, basic human needs are met worldwide.

Next Steps

There are many steps and a major societal transition between where we are today and an equitable, restorative world. This dialogue can help you move along that path.

Strategic Questions to Ask to Serve Christ in All Creation:

What <u>basic</u> human need(s) are we trying to meet? Which needs require "stuff" to satisfy?

Clean air, water, soil & food	Shelter, warmth, light	Understanding/meaning
Leisure & peaceful enjoyment	Creativity	Identity & spirituality
Health & safety	Participation in decisions	Love
Freedom & equal treatment	Mobility	Connection to community

Living more mindfully can dramatically reduce the material/energy we use, while enriching our lives. How might we act in ways that <u>systematically</u> decrease our use of:

Examples of More Sustainable, Creation-Conscious Practices

…substances extracted from the Earth's crust?

Meaning…
Fossil fuels, metals and other minerals are not extracted at a faster rate than their slow redeposit and reintegration into the Earth's crust.

- Reduce transportation: live near your work, buy locally grown and/or made
- Reduce fossil fuel use via: tele-commuting, public transportation, bicycling, carpooling; e-mail and regular mail rather than overnight services**;** use the smallest, most fuel-efficient vehicle in the class of vehicle needed for the most miles, and only rent or borrow extra capacity when you need it
- Use 'green' building & renovation practices
- Conserve energy & use energy efficient products
- Purchase electricity from renewable power providers
- At home & workplace, push for product repair, take-back & re-manufacture

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…persistent substances produced by society?

Meaning…
Man-made substances are not produced faster than they can be broken down & reintegrated into the cycles of nature.

- Use non-toxic, biodegradable and organic materials and products
- Avoid toxic, persistent and/or synthetic products
- Reduce, reuse, and recycle synthetic materials in closed loops
- Ask yourself, "When this material breaks down and spreads, will I want it in my body? --in the bodies of all creation? How can I get the same value and service while minimizing (or eliminating) my use of this material?"

…processes that reduce nature's functions and diversity by over-harvesting or other physical means?

Meaning…
Productive surfaces (e.g., green space, oceans) are not diminished in quality or quantity.

We do not harvest at rates faster than resources are recreated and renewed.

- Maintain open space & wetlands: increase density
- Promote transportation and building policies that limit sprawl
- Tele-commute &/or use building space effectively rather than expanding
- Promote habitat protection, biodiversity, & sustainable agriculture: eat less meat & more local, organic, seasonal produce; compost waste; replace chemical with organic lawn care; or better still, use native plantings
- Use non-toxic home and office cleaners
- Reuse materials, improve product durability and repairability, and recycle (with small down-cycles) so less virgin material is required
- Buy recycled materials & independently certified, sustainable forest products

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…more than our fair share, so we begin to be able to meet basic human needs worldwide?

Meaning…
Live by a golden rule that considers all living things in all generations.

- As Yankee's used to say, "Fix it up. Wear it out. Use it up or do without." Ask yourself, how might I live more meaningfully and simply?
- Give time and money to those in need
- Address the roots of social, ecological and/or economic problems in your community *<u>and</u> the communities from which your services, materials, energy and/or products are drawn*
- Support environmental and social justice, quality education for all, community building, micro-lending, public services, media-literacy, etc.
- Shift to flows of service: rent or lease rather than buy & dispose
- Expand opportunities for unemployed and under-employed populations
- Work for corporate accountability and ethical governance

Hopeful Trends

The impact of a community or organization's purchases or practices is much greater than that of an individual's. Our way of life tends to be wasteful, and our standard practice in transportation, buildings, materials and energy is generally very destructive. If changes are made at this larger scale, they will have much more impact. [vi]

In response to these daunting facts and connections, a growing number of people, in the hundreds of millions, are seeing themselves as global citizens. They are asking, "What might I (and/or my organization) do to improve things?" Even as the rate of social and environmental destruction increases, there are signs of a deep change in human society.[vii] ,

Around the world, this growing sector of society includes people of many backgrounds and views working together in the following ways:

Making efforts to Stop the Damage: This includes individuals who choose to live more simply, who work to make governments and organizations more accountable; and who challenge ignorance. In business, leading companies are practicing industrial ecology, turning waste from one operation into "food" for the next. They are using the new science of biomimicry: They are asking such questions as, "How can we mimic natural systems, i.e. how can we shape a surface to be self-cleaning, using only water, like a leaf?" The answers provide them with simple and efficient solutions to problems, eliminating waste. They are giving more back to the communities from which their people, energy and materials are drawn.

Creating and Supporting Alternative Structures and Habits: New kinds of programs, organizations and institutions are appearing, such as citizen-ticketing of buses and trucks emitting dirty exhaust, renewable energy co-operatives, intentional communities, home-schooling, urban greenhouses and farmers' markets, community supported farms, and support circles to help reduce material and energy consumption. These people are conserving resources, generating renewable energy, shopping locally to keep resources in their communities, turning off their TVs and entertaining themselves with conversation, home-grown music, story and dance.

Renewing the Spirit: They are re-defining humans' place in the universe, remembering we are just one of 6 billion, interconnected global citizens, and that humans are just one of millions of species. They are striving to honor the miracle of life on Earth; and asking themselves, "Am I ignoring the things which have the most meaning to me in my search for comfort?"[viii]

*****

What are some specific examples you have seen of people you know meeting human needs in ways that Serve Christ in All Creation?

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i UN World Population Census

ii US Geological Service (USGS) and "Ecological Footprint." Rees and Wackernagel, 1996)

iii Hawkins, 1993; and USGS – Material Extraction and Technology, 1990-present)

iv UNEP; Int'l Society for Conservation Biology; Intergovernmental Panel on Climate Change; and World Meteorological Organization

v UNEP; Korten, 2000; and Centre for Research on Globalization, 2002

vi Hawken et al 1999; World Business Council)

vii (Anderson, Ray, 2000, Macy 1998, Fodor, 1999)

viii Macy, 1998, and http://www.joannamacy.net/html/great.html

SESSION TWO

SUPPLEMENTAL MATERIAL

A. BIBLE STUDY

Exod. 23:10-11 – the seventh year
Lev. 25 – expansion of the jubilee; 25:24 "the land shall not be sold in perpetuity, for the land is mine"
Isaiah 5:8-9 – a commentary on sprawl and agribusiness?!
Luke 4:19 -- Jesus proclaims a Jubilee year
I Cor. 9:7, 10
I Cor. 15:36 -- what you sow does not come to life unless it dies
James 5:7-8 -- patience within the cycles of nature
Deut. 11:13-17 – right worship = good land and rain
Isa. 33:8-9 – "The land mourns and languishes" because of treachery
Jer. 7:20 – the whole system bears the punishment
Jer. 12:4 – the land mourns
Jer. 16:18 – the land "polluted" with idols
Ezek. 29:3-12 – arrogance of Egypt in claiming to "own" the Nile when it's the Lord's – instead of being given plants and animals for food he'll be given *to* the animals for food
Ezek. 34:17-22 – Fat Brother as sheep, and the Lord interfering to provide justice
Ezek, 35:12 – "they are given us to devour"
John 12:31 -- warrant for calling devil "prince of this world"
Acts 14:15-18 -- turn from idols to the living God who made heaven, earth, sea; sends rain and fruitful seasons; don't worship fellow humans
Rev. 11:18: the time has come for judgment, for rewarding the saints, "and for destroying those who destroy the earth."

B. STATEMENT OF THE 1987 AUSABLE FORUM:

A Christian Land Ethic

Background:

With the advent of modern science, disruptive science-religion debates, and a materialistic growth economy, Christendom has been stepping back from its closeness to the creation and the Creator, shifting its attention toward the individual self and the personal Redeemer. The growing environmental awareness in modern society is making the church realize that its long-standing confession of God as Creator has often become so muted that it allows for its confessors to stand by or even assist in the dismantling of the Creator's works.

Christians are now recognizing how God's creation is being degraded and what the scriptures and a renewed spirituality teach us about God's care for the earth. Belief in God as Redeemer presupposes belief in God as Creator. All of this leads to a Christian worldview that includes caring for the earth. It is necessary for Christians, and people generally, to be concerned about the land (God's created order) in which we live, which surrounds us, and which is entrusted to our care, and to speak out for the Creator's works.

Statements of Faith and Fact:

1. The earth is an orderly, interdependent system in which plants and animals live, adapted to their environment.
2. The earth is characterized by diversity, richness and a variety of plants, animals, and environs, all of which were declared by God as being good (Gen. 1:31).
3. Humans are part of the earth but do not own it since it is a gift from God entrusted to their care (Gen. 1:26; 2:15).
4. The original innocence of the garden has long vanished; human lives and the land are marred by decay, selfishness and strife.

Ethical Statements:

5. Humans cannot assume that they have an absolute right to the land.
6. The land, belonging to the created order, is finite and has a limited capacity for improvement and carrying burdens; therefore, just limits must be placed on expansion.
7. In most places we cannot live on the land without modifying it so that it provides shelter and nourishment. These necessary cultural interferences with the land should be weighed in several respects: Do the changes enhance or impair our general well-being? Do they unnecessarily inflict harm on the created order? How do they affect the well-being of future generations?
8. Since our life time is shorter than that of the land and since successive generations are always depending on the preceding ones, the land should be kept in trust for future generations.
9. All life, including our own, is sustained by the land. Therefore, human life cannot have an absolute priority at the expense of everything else.

Call to Prophetic Response:
10. Belonging to the new redeemed order, Christians are called by God and empowered by the Holy Spirit to shine forth as the light of the world and to become the salt of the earth. They are enabled to anticipate the hoped-for new creation in the present and to become prophetic witnesses in a fallen world.
11. Knowing that God's kingdom includes heaven and earth, we value the whole of God's created order without predominant concern for its utility.
12. As Christians, we have a prophetic task to remind the church and others that God intends that all people should enjoy the bounty of God's land; moreover, all creatures should be seen as having a rightful place in God's creation (Luke 1:51ff; Matt. 12:6).
13. Since humans have been entrusted with the care of creation, they will be held accountable for what they have done and left undone when the Master returns.
14. As Christians, we hope for a new heaven and a new earth in which righteousness dwells.
15. The creation, including humanity, waits eagerly for the fulfillment of the kingdom and to be set free from brokenness and death and the sin of self-centeredness and egotism (Rom. 8:19).

Ultimately, all life belongs to God, who sustains us in and through the land. Consequently, the destiny of the land and humanity are inextricably intertwined and must be recognized in thought and action. The creation is no commodity to be bought and sold, used and abused. It is a gift to be enjoyed and to be handled wisely. And wisdom itself is a gift of God.

Plea for Christian Stewardship:
Christian stewardship is rooted in the scriptures, is informed by instruction gleaned from the cosmic order, and flows from a communion with the Creator and a caring love for the creation. Christian stewardship is doing the Creator's will in caring for the earth and striving to preserve and restore the integrity, stability, and beauty of the created order, responding to creation's eager expectation of redemption. Christian stewardship is so living on earth that the Creator and creation are respected, the creation is preserved, brokenness is repaired, and harmony is restored. Christian stewardship seeks for the Creator's kingdom--a kingdom devoid of human arrogance, ignorance, and greed. Christian stewardship is so living on Earth that heaven will not be a shock to us.

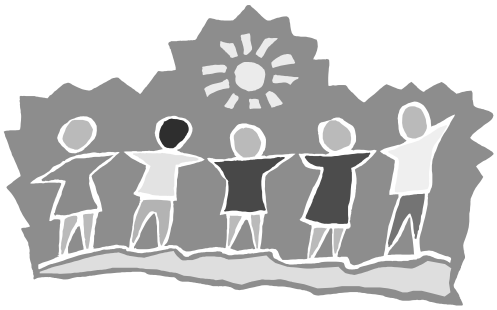
WHO IS MY NEIGHBOR?

UNDERSTANDING THE IMPACT OF ENVIRONMENTAL DEGRADATION

A Session Focusing on Climate Change, Consumer Choices, and/or Environmental Justice

The Pastoral Letter calls on us to:

- *Pray and take action to restore a right relationship between humankind and creation*
- *Commit ourselves to energy conservation and the use of sustainable sources of energy*
- *Reduce, reuse, and recycle, and as far as possible to buy products from recycled materials*.



OPENING PRAYERS

Choose one or two of the following to open the session:

Creator God, you make all things and weave them together in an intricate tapestry of life, which becomes the ground on which all humans make their lives. Teach us to remember the vulnerability of created order and to care for our sisters and brothers and for all the gifts of your creation.
Guide by your wisdom those leading ordinary lives and who have power and authority, that, by the decisions they make, life may be cherished and a good and fruitful Earth may continue to show your glory and sing your praises.

-- based on a prayer in the National Council of Churches NCC Earth Day Sunday 2001 Resource Packet.

God is the foundation for everything. This God undertakes, God gives. Such that nothing that is necessary for life is lacking. Now humankind needs a body that at all times honors and praises God. This body is supported in every way through the earth. Thus the earth glorifies the power of God.

-Hildegard of Bingen, from the Interfaith Declarations and Worship Observance Resources; The North American Conference on Religion and Ecology; 5 Thomas Circle, NW, Washington, DC 20005

O merciful Creator, your hand is open wide to satisfy the needs of every living creature: Make us always thankful for your loving providence; and grant that we, remembering the account that we must one day give, may be faithful stewards of your good gifts; through Jesus Christ our Lord, who with you and the Holy Spirit lives and reigns, one God, for ever and ever, Amen.

-Third Collect for Rogation Days; BCP p. 259

OPENING

(Described in Session One and in the Introduction)

DISCUSSION

Pick one or two questions from the lists below, and have each participant give their answer

"Pray and take action to restore a right relationship between humankind and creation."

In what areas have you taken action to change your consumption habits?

What drives our urge to consume material goods? What needs are we really trying to fill?

How might your life be worse if you had fewer material goods? A smaller or different living space? How might it be better?

What needs to happen to restore a right relationship between humankind and creation?

How might I honor my connection to creation and make it a more tangible presence in my life?

Our scriptures inform us that we are stewards of God's Creation. What do we need to know and understand in order to care wisely for our charge?

In what ways are we all connected? Who is our neighbor?

How would it affect our choices if we considered the people and the environment which make the products we consume to be our neighbors?

What is our fair share of the earths' resources compared to other species?

What environmental justice issues have you seen locally, or in your travels?

Imagine it is now 2050. The global decline is largely halted, and there has been a Great Turning towards life-enhancing practices. A 10 year old you love has been learning about the great changes and dangers of the early years of the century, and asks, "That must have been a scary time. How did it compare with other challenges in your life? What did you do to help make the changes happen? What did you do to sustain your hope?"
How might you answer him/her?

The scale of the challenge presented by climate change have been called "overwhelming," "daunting" and "epic." What does our faith say to us about how we can choose to act in response to such a challenge?

How can we address these issues and impacts in ways that strengthen our ability to fully meet human needs and at the same time care for the creation?

The writers of the Old Testament advocated a modest but comfortable sufficiency; those of the New Testament, a radical, ascetic poverty. Does one attract you more than the other? Why?

Do the reasons have to do with your own comfort, or with the overall balance of the earth's ecosystems? In what ways can we meet our "creature comfort" needs and maintain an
overall balance of the earth's ecosystems?

"Commit ourselves to energy conservation and the use of sustainable sources of energy"

What are all the ways we can think of to conserve energy and use sustainable sources of energy in our lives, work and in parish?

"Reduce, reuse, and recycle, and as far as possible to buy products from recycled materials"

What can you do in the next 24 hours, no matter how small a step to conserve energy , to reduce, to reuse, to recycle? In the next month? Year?

What are all the ways we can think of to share, reduce, reuse, and recycle, and to use environmentally preferred products?

Before closing prayers, the facilitator reminds the group to read the Session Four readings before the next session. At this time, the coordinator should ask for volunteers to do openings and to facilitate the next meeting.

CLOSING PRAYERS

Litany

To be read responsively

Blessed are you who are poor, for yours is the kingdom of God. Blessed are you who are hungry now, for you will be filled. (Luke 6:20-21)
For what will it profit them if they gain the whole world but forfeit their life? (Matt. 16:26)

And she gave birth to her firstborn son and wrapped him in bands of cloth, and laid him in a manger, because there was no place for them in the inn. (Luke 2:7)
And Jesus said to him, "Foxes have holes, and the birds of the air have nests; but the Son of Man has nowhere to lay his head." (Matt. 8:20)

He ordered them to take nothing for their journey except a staff; no bread, no bag, no money in their belts; but to wear sandals and not to put on two tunics. (Mark 6:8-9)
For we brought nothing into the world, so that we can take nothing out of it; but if we have food and clothing, we will be content with these. (I Tim. 6:7-8)

For the love of money is a root of all kinds of evil. (I Tim. 6:10)
You cannot serve God and wealth. (Matt. 6:24)

Why do you spend your money for that which is not bread, and your labor for that which does not satisfy? Listen carefully to me, and eat what is good, and delight yourselves in rich food. (Isa. 55:2)
Better is a little that the righteous person has, than the abundance of many wicked. (Psalm 37:16)
P
Remove far from me falsehood and lying; give me neither poverty nor riches; feed me with the food that I need,
or I shall be full, and deny you, and say, "Who is the Lord?" (Prov. 30:8-9)

It is easier for a camel to go through the eye of a needle than for someone who is rich to enter the kingdom of God. (Mark 10:25)
Be on your guard against all kinds of greed; for one's life does not consist in the abundance of possessions. (Luke 12:15)

Keep your lives free from the love of money, and be content with what you have; for he has said, "I will never leave you or forsake you." (Hebrews 13:5)
All who believed were together and had all things in common; they would sell their possessions and goods and distribute the proceeds to all, as any had need. (Acts 2:44-45)

Therefore I tell you, do not worry about your life, what you will eat, or about your body, what you will wear.
For life is more than food, and the body more than clothing.

Consider the ravens: they neither sow nor reap, they have neither storehouse nor barn, and yet God feeds them. (Luke 12:22-24)
Consider the lilies, how they grow: they neither toil nor spin; yet I tell you, even Solomon in all his glory was not clothed like one of these. (Luke 12:27)

Do not store up for yourselves treasures on earth, where moth and rust consume and where thieves break in and steal;
but store up for yourselves treasures in heaven, where neither moth nor rust consumes and where thieves do not break in and steal. For where your treasure is, there will your heart be also. (Matt. 6:19-21)

Prayer

You alone are unutterable, from the time you created all things that can be spoken of.
You alone are unknowable, from the time you created all things that can be known.
All things cry out about you, those which speak, and those which cannot speak.
All things honor you, those which think, and those which cannot think.
For there is one longing, one groaning, that all things have for you…
All things pray to you that comprehend your plan and offer you a silent hymn.
In you, the One, all things abide,
and all things endlessly run to you who are end of all.

-Gregory of Nazianzen

SESSION THREE

SUPPLEMENTAL MATERIAL

EXERCISE

adapted from Macy et al: "Coming Back to Life," 1998

If you knew you could not fail, how would you like to contribute to the transition of your organization/community to sustainable practices?
In pursuing this vision, what particular project would you like to undertake? Think about what could be accomplished or well underway in a year's time.
What resources, inner and outer, do you have that will help you do that? Inner resources include character, skills, knowledge. Outer resources include money, relationships, contacts, networks you can draw on, as well as your location, position, etc.
Who do you need to work with to pursue this idea, and in what ways?
What strategic questions will be useful in engaging them (or the organization)?
What barriers might you run into? What questions could be helpful in overcoming them?

BIBLICAL REFERENCES

Isaiah 55:2 – critique of unnecessary consumption!
Jeremiah 17:11 -- "like the partridge hatching what it did not lay"
Beatitudes/Sermon on the Mount – radical anti-consumption, dependence on God
Matt. 6:19-21 -- where your treasure is
Matt. 6:24 -- God and mammon
Matt. 6:25-34 – lilies of the field
Matt. 16:25-26 – what will it profit to gain the whole world but lose life?
Mark 10:21 -- sell what you have and give to the poor
Mark 10:23-27 -- needle's eye
Mark 10:28-31 -- give up possessions and will receive a hundredfold
Luke 6:24-25 -- woes on the rich
Luke 12:15 -- guard against greed
John 2:13-16 -- cleansing of the Temple -- "Stop making my Father's house a marketplace"
Phil. 3:18-19 -- pretty accurate description of modern consumerism -- not an indictment, a statement of simple fact
I Tim. 6:6-10 -- food and clothing are enough, love of money is root of evil
Heb 13:5-6 -- free from love of money, Lord will help
James Ranting Against the Rich: Jas 1:9-11, 2:6-7, 5:1-6

FOCUS TOPIC FOR SESSION THREE:

CLIMATE CHANGE

What is it, what will it mean for the world and for New England?

On Monday October 28, 2002 the largest Climate Justice protest in history marched through the streets of Delhi, India. More than 5,000 people met at Mahatma Gandhi's memorial to protest climate injustice.

The demonstrators proceeded towards Jantar Mantar, in the heart of the city…The Rickshaw Unions came out in force, bringing about 100 pullers known as wallah, and their rickshaws -- an age-old method of [direct human and] bicycle-pulled transportation. Cycle rickshaws are banned from the city center, a district of big hotels, shopping areas, and the buildings of Parliament and the Presidential Palace…Said one rickshaw wallah: "The rich people drive around this district of Delhi, one person to a car -- they are contributing to the pollution. We do not make any pollution yet we are banned from being allowed to work in this district."

Many rickshaw pullers are members of the displaced urban poor who migrated to the city because floods, drought and corporate globalization have adversely affected their communities. They live in shantytowns by the polluted river's edge. --- Yin Shao Loong, -Third World Network

What feelings and thoughts does this story provoke?

From: To Serve Christ In All Creation

> "One of the most daunting challenges we face is global climate change. Many scientists agree that if we burn fossil fuels at expected rates, global warming caused by human activities could raise worldwide average temperatures between 3 and 11°F…in this century. Climate change may cause flooding in our coastal areas, reduce the quality of our region's fresh water, imperil agriculture, and increase the outbreaks of infectious disease. Within this century, New England may lose its maple, birch, and beech trees…our spectacular fall colors and the end of fall-foliage tourism…[and] our…maple sugar industry."
>
> "Global warming is but one stark example of the troubled relationship between humanity and the natural world. Environmental issues are not just scientific, political, or economic issues, but ones that are profoundly moral and spiritual, as well. As Christians we cannot remain silent. Christianity offers an imperiled world the conviction that God's creation is good, and that God in Christ has redeemed not only the individual human soul, but also the whole of creation."

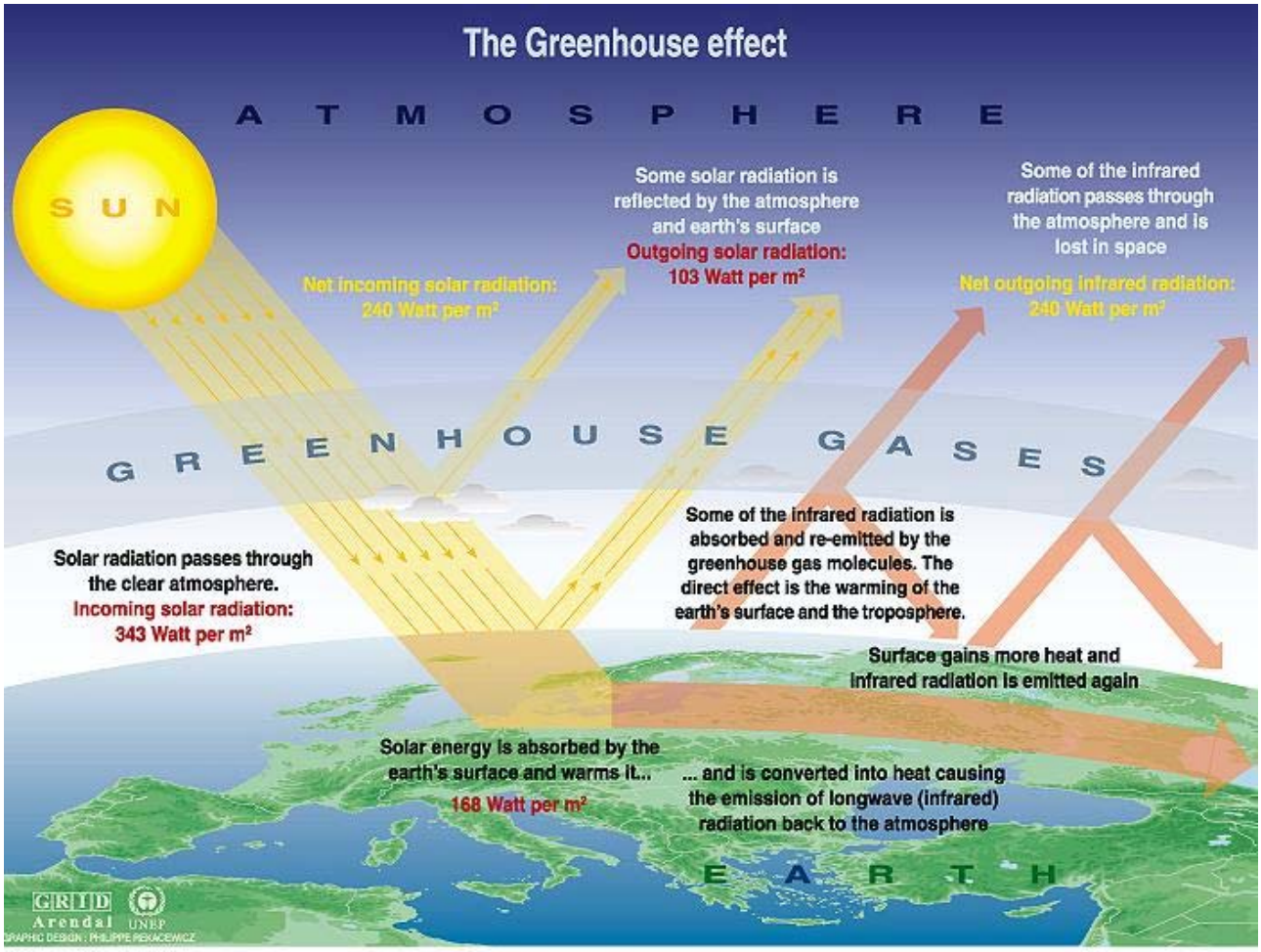
The Pastoral Letter asks us to:

To commit ourselves to energy conservation and the use of clean, renewable sources of energy
To realize that, through participation in community, public policy, and business decision-making, we have corporate as well as individual opportunities to practice environmental stewardship and justice

AN INTRODUCTION TO CLIMATE CHANGE[1]

A planet's climate is determined by its mass, its distance from the sun and the composition of its atmosphere. Mars is too small to keep a thick atmosphere, so its average temperature is –50°C. Venus' atmosphere is so thick with greenhouse gasses its temperature is 420°C. Earth's mass and atmospheric composition are quite amazingly perfect for life, with an average temperature of 15°C.

The Earth has a natural temperature control system. Certain atmospheric gases are critical to this system and are known as greenhouse gases. Over the last 400,000 years the Earth's climate has been unstable, with very significant temperature changes, going from a warm climate to an ice age in as little as a few decades. These rapid changes suggest that climate may be quite sensitive to internal or external climate forcings and feedbacks. For the last 10,000 years or so, we've been enjoying an unusually stable, warm period.



Sources: Okanagan university college in Canada, Department of geography, University of Oxford, school of geography; United States Environmental Protection Agency (EPA), Washington; Climate change 1995, The science of climate change, contribution of working group 1 to the second assessment report of the intergovernmental panel on climate change, UNEP and WMO, Cambridge university press, 1996.

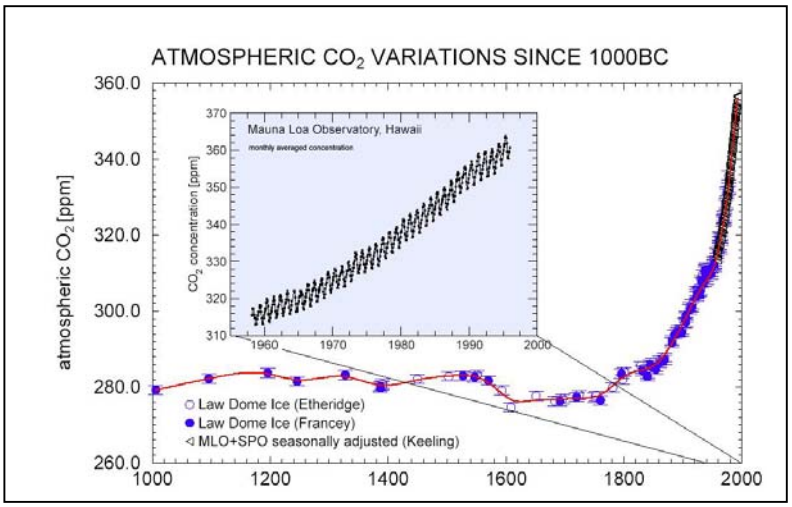
[1] This introduction has been edited from, and includes data from the Intergovernmental Panel on Climate Change (IPCC), the National Academy of Sciences, ClimateChanging.org, Negative Population Growth, National Energy Project (UK) and the US EPA.

Unfortunately, human activity is shifting the energy balance to trap more of the sun's radiation relative to what's being released back to space, by increasing the atmospheric concentrations of these gases. Atmospheric carbon dioxide (CO_2) a key greenhouse gas, has increased from a pre-industrial concentration of about 280 ppmv (parts per million by volume) to about 367 ppmv at present, primarily as the result of burning carbon for energy production, industrial processes and transportation. Additional emissions of carbon dioxide mainly come from the cutting down of forests and converting the land to agriculture or built-up areas, urbanization, roads etc.

The rich countries of the world historically have emitted most of the anthropogenic greenhouse gases since the start of the industrial revolution.

No-one intentionally designed our current industrial system to threaten the balance of the planet. If we wanted to create a better system of delivering goods and services to everyone on the planet, where and how do you think we should start? What seems most important to address first?

In 1988, UN Environmental Program (UNEP) and World Meteorological Organization (WMO) jointly established the Intergovernmental Panel on Climate Change (IPCC), as concern over climate change became a political issue. The purpose of the IPCC was to assess the state of knowledge on the various aspects of climate change including science, environmental and socio-economic impacts and response strategies. Involving some 2500 scientists from around the world and the highest possible standards, the IPCC keeps the world current on the latest understanding of this threat to life on Earth as we know it.



The IPCC's most recent summary states, "Projected climate changes during the 21st century have the potential to lead to future large-scale and possibly irreversible changes in Earth systems, resulting in impacts on continental and global scales… Globally average surface air temperatures have increased by 0.6 ± 0.2°C over the 20th century…globally averaged surface air temperature is projected by models to warm 1.4 to 5.8°C by 2100 relative to 1990, and globally averaged sea level is projected by models to rise 0.09 to 0.88 m by 2100. These projections [also] indicate that the warming would vary by region, and be accompanied by [regional] increases and decreases in precipitation. In addition, there would be changes in the variability of climate, and changes in the frequency and intensity of some extreme climate phenomena."

So What Does All This Mean For People and the Planet?

The impacts of future changes in climate extremes are expected to fall disproportionately on the poor. Most less-developed regions are especially vulnerable because a larger share of their economies are in climate-sensitive sectors and their adaptive capacity is low due to low levels of human, financial, and natural resources, as well as limited institutional and technological capability."

-Intergovernmental Panel on Climate Change (IPCC), 2001

The Rural Poor and Indigenous Peoples:
"Climate change would probably exacerbate hunger and poverty around the world...People who are highly dependent on farming, fishing or forestry will well see their livelihoods destroyed."
—The United Nations Environment Programme

The Urban Poor:
"Climate change will be accompanied by an increase in heat waves, often exacerbated by increased humidity and urban air pollution, which would cause an increase in heat-related deaths...The impact would be greatest in urban populations, affecting particularly the elderly, sick and those without access to air-conditioning."
—Intergovernmental Panel on Climate Change (IPCC)

The Coastal Dwelling Poor:
[Models forecast]…a widespread increase in the risk of flooding for many human settlements...from both increased heavy precipitation and sea-level rise." (IPCC) Particularly hard hit will be low-lying countries like Bangladesh and small island states. Their very existence may be threatened.

Communities Already Affected by the Oil Industry:
Communities that already bear the brunt of oil company activities-such as the Ogoni in the Niger Delta, the Gwich'in in the Arctic Refuge, or African Americans in Norco, Louisiana—face a "double whammy." First they are hit by the local environmental and human rights problems associated by the oil industry. And then they face the prospect of their communities being flooded or destroyed by climate change.
--Corporate Watch, March, 2001

[See Additional Readings (below) for a summary of the most likely and significant changes expected on major land masses.]

The scale of the climate change challenge has been called "overwhelming," "daunting," and "epic." What does my faith say to me about how I might choose to act in response to such a challenge?

Since 1950, the richest 20% of the world's population has increased its per capita consumption of meat and timber two-fold, its car ownership four-fold and its use of plastics five-fold. The poorest 20% has increased its consumption hardly at all.

The population of Bangladesh is increasing by about 2.4 million per year, while that of Britain is increasing by about 100,000 per year. Yet, because carbon dioxide emissions per person in Britain are 50 times higher than in Bangladesh, the 100,000 people in Britain cause more than double the carbon dioxide emissions of the 2.4 million people in Bangladesh.
-- National Academy of Sciences, "Towards Sustainable Consumption"

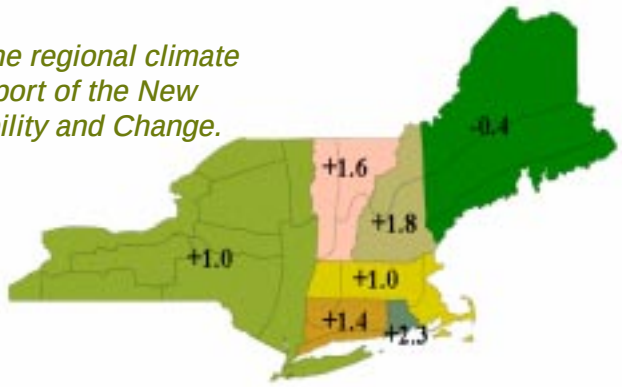
By comparison, the US population is growing by 3.2 million per year, and the average American is responsible for 92 times more CO2 emissions/year than a citizen of Bangladesh. In a further irony, Bangladesh is among the countries most threatened by sea level rise due to climate change; tens of millions of its citizens could well be forced to relocate.

How Will the New England Region be Affected by Climate Change?

Records of regional temperatures and rainfall show that the regional climate has warmed since 1895, according to the August 2001 report of the New England Regional Assessment of Potential Climate Variability and Change.

Overall, New England and upstate New York have warmed by 0.7º F, yet some states (RI, NH) have warmed by two to three times the regional average. One state (ME) has cooled. Warming in winter months has been greater than summer-time warming. The milder winters, earlier maple sap flows, earlier dates for ice melting on lakes, and reduced snowfall recently experienced across the New England region are all likely responses to this increase in temperature.

Human activities are affecting climate. There is now strong scientific evidence and consensus that much of the global warming experienced in the last half of the 20th century is attributable to human factors.

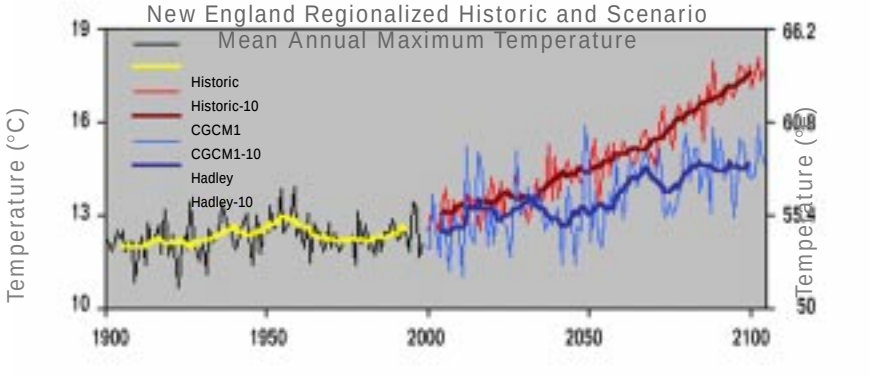


Temperature changes* in the region between 1895 and 1999 indicate that regional climate in general is warming. The opposite historic temperature patterns in Maine and New Hampshire may be due to differing land use practices or proximity to the ocean.

*The temperature values above are area weighted.

▶ Significant warming of 6-10º F projected over the next century. Two respected climate models project significant warming and an increase in precipitation for the New England Region. The Hadley Model projects a warming of 6º F in annual minimum temperatures and a 30% increase in precipitation for the region, while the Canadian Model projects a 10º F warming in minimum temperatures and a 10% precipitation increase over the next century. Either temperature increase would be greater than any climatic variation experienced in the region in the past 10,000 years. If either scenario occurs, the climate of the New England Region will be profoundly different than the climate of today.

If 6º F are added to Boston's 30-year (1961-1990) average temperature, the resulting temperature is approximately the 30-year average for Richmond, VA. If 10º F are added to Boston's 30-year average, the 30-year average for Atlanta, GA is the result.



▶ Regional air quality will worsen. If the climate becomes hotter and wetter, and automobile and power plant emissions remain the same or increase, regional air quality and acid rain problems will become worse in the future. Hotter temperatures increase the formation of smog and sulfate haze, and water vapor combines with compounds from automobile exhaust and power plant emissions to produce acid rain.

▶ Risks to human health will significantly increase. Not only will our health be affected by increased levels of air pollution, but warmer winters can facilitate the expansion of Lyme disease-carrying tick populations and other disease vectors in the region.

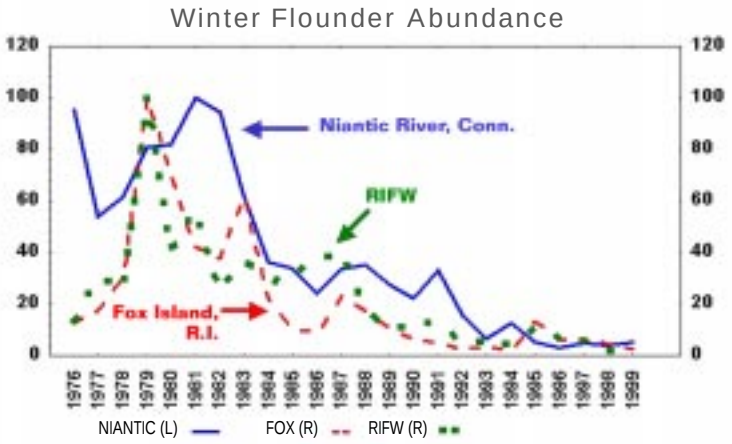
▶ The New England natural environment will be altered. New England forests are already under stress. Warm temperatures allow insects and tree diseases to flourish and permit the introduction of exotic plant species. Potential droughts or flooding projected by models will have profound impacts on regional water availability and quality, and warming coastal waters will cause species shifts and toxic algal blooms. Sea-level rise could become a significant problem for low-lying coastal regions, affecting human infrastructure, beaches and coastal wetlands.

Maple syrup producers in the region are concerned about the regional decline in sugar maple health as syrup production shifts from New England to Quebec.

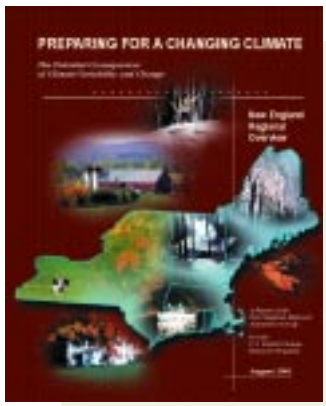
▶ The impacts of climate change on the regional economy will vary and be significant. An assessment of some of the major regional industries shows that economic impacts are likely to be greatest on the human health sector, moderate on tourism and least severe on the natural resources sector due to the resiliency of the forest industry to projected changes.

What can we do? Win-Win Strategies

New England decision and policy makers have several options to reduce or eliminate potentially adverse impacts while offering other benefits, such as cleaner air and a stronger regional economy. These actions include promoting the use of forests to absorb and store carbon dioxide, reducing regional air pollution by reducing emissions from automobiles and power plants, developing highly efficient energy sources, and investing in "green technologies."



Winter flounder has experienced an obvious decline over the past 25 years, which can be mainly attributed to a combinaton of fishing pressure and warmer water temperatures.



Learn more about the results of the New England Regional Assessment and strategies for reducing potentially adverse impacts by reading **Preparing for a Changing Climate: The Potential Consequences of Climate Variability and Change**. *This report was prepared for the U.S. Global Change Research Program and is the product of a four-year effort to characterize the impacts of climate change on the New England Region. Over 300 stakeholders, representing a broad range of interests, participated in the NERA effort. Copies may be obtained by contacting Faith Sheridan at faith.sheridan@unh.edu or at 603-862-1792.*
The report is also available online at www.necci.sr.unh.edu.

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How do I, as someone living in the industrialized world, contribute to this situation?

Northeastern states' greenhouse gas emissions total slightly more than all of Canada, 128.3 vs. 127.5 million metric tons/year.

	State Totals	Per Capita		State Totals	Per Capita
Maine	5.0	4.0	New Hampshire	4.8	4.0
Vermont	1.7	2.8	Massachusetts	17.8	2.9
Connecticut	10.3	3.1	Rhode Island	3.0	3.0
New York	53.1	2.9	New Jersey	32.6	4.0

Source: US Census, New England Governor's Conference, US EPA, Kleiman, 2002

In the absence of strong support for climate change action from the US federal government, virtually all the New England states, the eastern Provinces of Canada, forward-thinking municipalities and businesses have embarked on their own individual and collective efforts to reduce their greenhouse gas emissions.

In what ways might our parish, workplaces, communities and/or households reduce our carbon pollution: our contributions to climate change and poor air quality?

Some opinion leaders are seeing strong evidence that climate change politics will follow the pattern seen with South African apartheid. Initially, the US federal government strongly resisted US public, interfaith and international pressure to address the issue. In the absence of national governmental leadership, over time many municipalities, pension funds, faith groups, and NGO's took strong, positive action, and eventually federal policy followed suit.

There are further reasons for hope. As the IPCC has written, the solutions to climate change, namely "…adaptation, sustainable development, and enhancement of equity can be mutually reinforcing." Addressing environmental and social injustice, reducing our workplace, community and household consumption, etc, --even logistically simple things such as combining trips so we drive less, and buying renewably generated electricity-- can have multiple, synergistic benefits for all of Creation.

Christ spoke deep truths. Despite strong resistance from those in power, he practiced a radical honesty about our true nature, about dominant power, and about the higher truths of our faith. Historically our faith was born of, and has repeatedly confronted, many fundamental problems, i.e. slavery and inequity. How might my faith help me find the strength to confront the difficult issues we face now? How might we as a community, get better at practicing Christ's radical honesty with respect to tough issues like climate change?

Discussion Questions:
(The questions above are repeated, and more are added from which to choose.)

1. Climate change is a huge, complex issue. For example, this overview cannot even touch on the monumental potential economic costs of climate change. What questions do you have after reading this overview? Where might you go to get some answers?

2. The scale of the climate change challenge has been called "overwhelming," "daunting," and "epic." What does my faith say to me about how I might choose to act in response to such a challenge?

3. No one intentionally designed our current industrial system to threaten the balance of the planet. If we wanted to create a better system of delivering goods and services to everyone on the planet, where and how do you think we should start? What seems most important to address first?

4. In what ways might our parish, workplaces, communities and/or households reduce our carbon pollution: our contributions to climate change and poor air quality?

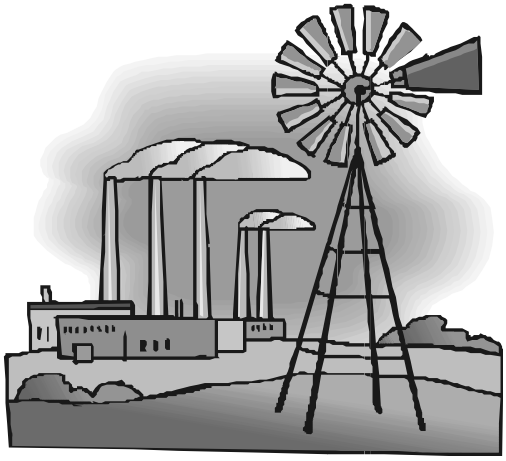
5. How might my personal and work-life actions play a role in climate change?

6. The US government rejected the Kyoto Protocol on Climate Change, to the shock of many other nations. What meaning might you take from that rejection if you lived in an endangered, island country? If you lived next to an oil or coal-fired power plant?

7. How could you learn more about what's being done to address climate change in your area?

8. Imagine you are talking to a young girl, decades from now. She asks, "That must have been a scary time, when it looked like the planet might get too hot for people. What did you do (to change the situation)?" How would you like to be able to answer her?

9. In principle, most people think New England should produce more of its electricity using its plentiful climate neutral, renewable energy sources, specifically wind and biomass. Yet many local citizens' groups and environmental organizations have successfully blocked siting such energy generation facilities. How does my faith direct me in valuing a pristine mountain or coastline compared to lower asthma rates among those living next to one of the region's oil or coal-fired power plants? Who are my neighbors, in such a context?



ADDITIONAL READING

Qualitative Assessment of Regional Adaptive Capacity, Vulnerability, and Key Concerns
NOTE: All entries are High Confidence projections, except where noted. The available literature has not yet investigated climate change impacts, adaptation, and vulnerability associated with the upper end of the projected range of warming. –IPCC

Africa	Adaptive capacity of human systems in Africa is low due to lack of economic resources and technology, and vulnerability high as a result of heavy reliance on rain-fed agriculture, frequent droughts and floods, and poverty. o Grain yields are projected to decrease for many scenarios, diminishing food security, particularly in small food importing countries (*medium to high confidence*). o Increases in droughts, floods, and other extreme events would add to stresses on water resources, food security, human health, and infrastructures, and would constrain development in Africa. o Coastal settlements in, for example, the Gulf of Guinea, Senegal, Gambia, Egypt, and along the East–Southern African coast would be adversely impacted by inundation and coastal erosion.
Asia	Adaptive capacity of human systems is low and vulnerability is high in the developing countries of Asia; the developed countries of Asia are more able to adapt and less vulnerable. o Extreme events have increased in temperate and tropical Asia, including floods, droughts, forest fires, and tropical cyclones. o Sea-level rise and an increase in the intensity of tropical cyclones would displace tens of millions of people in low-lying coastal areas of temperate and tropical Asia; increased intensity of rainfall would increase flood risks in temperate and tropical Asia. o Sea-level rise would put ecological security at risk, including mangroves and coral reefs.
Europe	Adaptive capacity is generally high in Europe for human systems; southern Europe and the European Arctic are more vulnerable than other parts of Europe. o Summer runoff, water availability, and soil moisture are likely to decrease in southern Europe, and would widen the difference between the north and drought-prone south. o River flood hazard will increase across much of Europe (*medium to high confidence*); coastal flooding, erosion, and wetland loss will increase substantially with implications for human settlement, industry, tourism, agriculture, and natural habitats. o Upward and northward shift of biotic zones will take place. Loss of important habitats (wetlands, tundra, isolated habitats) would threaten some species.
Latin America	Adaptive capacity of human systems in Latin America is low, particularly with respect to extreme climate events, and vulnerability is high. o Loss and retreat of glaciers would adversely impact runoff and water supply in areas where glacier melt is an important water source. Floods and droughts would become more frequent, increasing sediment loads and degraded water quality. o Increases in intensity of tropical cyclones would alter the risks to life, property, and ecosystems from heavy rain, flooding, storm surges, and wind damages. o Yields of important crops are projected to decrease in many locations…subsistence farming in some regions could be threatened. o The geographical distribution of vector-borne infectious diseases would expand, and exposures to diseases such as malaria, dengue fever, and cholera will increase (*medium confidence*).

Polar Regions	Natural systems in polar regions are highly vulnerable to climate change and current ecosystems have low adaptive capacity; technologically developed [polar] communities are likely to adapt readily to climate change, but some indigenous communities, in which traditional lifestyles are followed, have little capacity and few options for adaptation. o Climate change in polar regions is expected to be among the largest and most rapid of any region on the Earth, and will cause major physical, ecological, sociological, and economic impacts, especially in the Arctic, Antarctic Peninsula, and Southern Ocean. o Changes in climate that have already taken place are manifested in the decrease in extent and thickness of Arctic sea ice, permafrost thawing, coastal erosion, changes in ice sheets and ice shelves, and altered distribution and abundance of species. o Polar regions contain important drivers of climate change. Once triggered, they may continue for centuries, long after greenhouse gas concentrations are stabilized, and cause irreversible impacts on ice sheets, global ocean circulation, and sea-level rise (*medium confidence*).
North America	Adaptive capacity of human systems is generally high and vulnerability low in North America, but some communities (e.g., indigenous peoples and those dependent on climate-sensitive resources) are more vulnerable; social, economic, and demographic trends are changing vulnerabilities in sub-regions. o Sea-level rise would result in enhanced coastal erosion, coastal flooding, loss of coastal wetlands, and increased risk from storm surges, particularly in Florida and much of the Atlantic coast. o Weather-related insured losses and public sector disaster relief payments are increasing; insurance sector planning does not yet systematically included climate change information. o Vector-borne diseases—including malaria, dengue fever, and Lyme disease—may expand their ranges. o Exacerbated air quality and heat stress morbidity and mortality would occur (*medium confidence*) o (See also New England Climate Change Summary)
Small Island States	Adaptive capacity of human systems is generally low in small island states, and vulnerability high; small island states are likely to be among the countries most seriously impacted by climate change. o The projected sea-level rise for the next 100 years would cause enhanced coastal erosion, loss of land and property, dislocation of people, increased risk from storm surges, reduced resilience of coastal ecosystems, saltwater intrusion into freshwater resources, and high resource costs to respond to and adapt to these changes. Islands with very limited water supplies are highly vulnerable to the impacts of climate change on the water balance. o Limited arable land and soil salinization makes agriculture, both for domestic food production and cash crop exports, highly vulnerable. o Tourism, an important source of income and foreign exchange for many islands, would face severe disruption from climate change and sea-level rise.

FOCUS TOPIC FOR SESSION THREE:

IMPACT OF CONSUMER CHOICES

Where do our individual actions fit in?

We sat down to a dinner served on a variety of hand-made plates. Someone asked Nancy about them. She answered:

> "Years ago, I was a potter. Paying my bills, I became aware of the huge amount of energy it took to run the kiln. Then I got curious about where my clay stock and glazes came from, and what it took to make them. I learned about quarrying and preparing clay. I also looked at mass-produced plates and bowls compared to the works of heart I ate on, made by other potters or my own hands. Now, after so many years, I can't imagine what I'd miss if I ate regularly off dishes and with utensils to which I had no personal connection, no personal connection to who made them. Such meaning changes the whole act of eating, just as knowing where and who grew the food makes a feast of the simplest ingredients. It's also made me more aware of the impacts of all my purchases."

Something shifted. I wasn't going to throw out my table service at home, but I realized I had been missing something deep and wonderful. *–Paul Lipke*

From "To Serve Christ In All Creation:"

"God's earth and all God's creatures now face perilous and potentially cataclysmic changes as a direct result of human activities."

The land and the rivers, the air and the sea belong to God, not to human beings ("The earth is the Lord's and all that is in it," (*Psalm 24:1).*

We are part of the created order, not separate from it, and our first calling by God is to be the caretakers of creation. *(Genesis 2:4b-8, 15)*

The Pastoral Letters asks us to:

- *To repent of greed and waste, and to seek simplicity of life*
- *To commit ourselves to energy conservation and the use of clean, renewable sources of energy*
- *To reduce, reuse, and recycle, and as far as possible to buy products from recycled material*

Somewhere along the way a mindset became ingrained that humans are separate from nature. We see it in our language:

- Humans and the 'environment' – as if the environment is out there and separate from people and our economy
- 'Natural resources/raw materials' – the wonder of creation is defined as inputs to our industrial economy
- 'Environmentalists' – just one of many special interests with an agenda

Every breath we take, every drop of water we drink, all the food we eat, and every consumer product we buy comes from the earth. While this may seem obvious, the nature of our modern industrial economy makes it easy to forget this. We must remind ourselves that the shrink-wrapped meat at the store was once a living cow, that the paper that churns out of our laser printers was once trees in a forest, that even our computers and cars are all derived from earth based materials. Plastics come from petrochemicals, which come from fossil fuels, which were formed from plants and animals that lived 300 million years ago in primordial swamps and oceans.

How might you remember and honor this connection to creation and make it a more tangible presence in your life?

Rather than 'caretakers of creation' we have become 'consumers of creation.' Since 1940, Americans have consumed more mineral resources than in all of human history up to that point. The Merriam-Webster dictionary definition of consume is "to spend wastefully; squander; use up." The pace of our consumption of material goods is much faster than pace which nature creates the resources that go into them or breaks down their wastes:

- The US has lost over 90% of its old growth forests – but the remaining forests with 200 year-old trees are still being logged to make the paper we use every day.
- Plastic water bottles – Used for a brief time - take 50-80 years to decompose
- In 1998, each American threw away an average of 4.5 pounds of waste every day, which adds up to 220 million tons/year.[1]
- Oil and other fossil fuels and metals took millions of years to form – they can be viewed as a one-time gift from previous generations that cannot be renewed.

For what various reasons did the writers of the Bible object to people's fondness for material goods?
Why do we do so now?

As the sign on the highway overpass said "we are not <u>in</u> a traffic jam, we <u>are</u> the traffic jam." People all over the planet are waking up to see that our ecological crisis is the result of our own individual choices and actions.

What are areas where you have taken actions to change your consumption habits?
What drives our urge to consume material goods? What needs are we really trying to fill?

> "The everyday advertising lie: Summon up a profound human value…intertwine the material product with soulful evocations of the nonmaterial value. Want youth and energy? Buy Coke. Love your kids? Buy toys. Want a peaceful, relaxing home? Buy L.L. Bean chenille bedspreads.
>
> Think of the effort, the money, the resources put into designing, making, advertising, buying, shipping, storing, and disposing of these unsatisfying substitutes for very real nonmaterial needs. Imagine putting even a fraction of that effort directly into home, comfort, health, cleanliness, nature, respect, friends and love." -*Donella Meadows*

MAKING SMARTER CHOICES

When we start to appreciate the connections between our actions and the earth, it can be difficult to wade through the choices and often we feel guilt over each decision like paper or plastic. It can be helpful to focus our efforts on those actions we take that cause the most environmental impact. The Union of Concerned Scientists conducted a study to analyze the impacts of our everyday decisions on the earth.[2] They concluded that the following seven consumer activities have a disproportionately large impact on our national environmental problems:

- Driving cars and light trucks (this is the BIG one)
- Eating meat and poultry
- Eating fruits, vegetables, and grains
- Heating and air conditioning our buildings and heating hot water
- Operating appliances and lighting
- Constructing our homes
- Providing water and sewage disposal

Based on this research, you can have the greatest impact by focusing on the following priority areas for personal action:

Transportation

1. Choose a place to live that reduces the need to drive
2. Choose the most fuel-efficient, low-polluting car in the relevant vehicle class.
3. Walk, bicycle, take public transportation (even better)
4. Reduce travel: combine trips, vacation near home
5. Avoid purchasing an additional car

Food

6. Eat less meat, poultry & fish, and more produce, especially if it's local, seasonal and organic.

Household Operations

7. Choose your home to minimize driving & size
8. Increase the energy efficiency of home heating, hot water, appliances & lighting
9. Choose a renewable electricity supplier
10. Use less stuff, water, energy, etc.
11. Build community & create your own entertainment.

What might be the benefits you would experience of taking actions in these areas?
How might your congregation help you and others take action in these areas?

TRANSPORTATION IMPACTS

- With less than 5% of world's people, the U.S. has 34% of the world's 556 million motor vehicles-- some 201 million cars, trucks, vans and buses (1994).
- The US population travels over 2 trillion miles per year, burning 120 billion gallons of gasoline. Not counting the "upstream" emissions from producing the fuel, the result is over a billion tons of CO2 pollution each year, which stays in the atmosphere 50 – 200 years.
- Only about 10 percent of the world's population can afford a car (Sierra Club web site).
- The US has nearly four million miles of roadways, which translates into 19,000 square miles – an area equal to Vermont and New Hampshire combined. These roads create impacts to habitat, wildlife, and plants including road kills, habitat loss, degradation and fragmentation, air, water, soil and noise pollution.
- Every day 1 million animals are killed on America's roadways.
- Motor vehicles are responsible for:
    - More than 2/3rds of the carbon monoxide in the atmosphere
    - One third of the nitrogen oxides, which react to form ozone, smog and acid rain
    - A quarter of the hydrocarbons, which also contribute to ozone pollution.
- Cars are the greatest contributor to air pollution in the Burlington, Vermont area. Each year, motor vehicles in Vermont emit about 1,000 tons of toxic and carcinogen compounds into the air.[3]
- The amount of driving in Maine has increased 60% from 1983 to 1997 while the population has remained stable.[4]

TRANSPORTATION FACTS FOR BOSTON

Annual miles traveled by car per household: 20,691 miles
Percentage of trips taken by car: 82.8%
Percentage of trips taken by transit: 2.8%
Percentage of trips taken by foot: 6.6%
Percentage of trips taken by bicycle: 1.0%
Portion of Family Budget Devoted to Transportation: **15.2%**
Annual Household Spending on Transportation: **$5,788**[5]

FOOD IMPACTS

In the United States, food typically travels between 1,500 and 2,500 miles from farm to plate, as much as 25 percent farther than in 1980.[6]

Farming

American farming has shifted towards concentrated production managed by a few large corporations. Now only 2% of Americans farm the land. There are several environmental risks associated with large-scale farms[7]:

- Concentrated Animal Feeding Operations (CAFOs) create one of the nation's most dangerous water pollution problems. According to the Environmental Protection Agency, hog, chicken and cattle waste has polluted 35,000 miles of rivers in 22 states and contaminated groundwater in 17 states.
- Livestock produce an enormous amount of waste - about 2.7 trillion pounds of manure a year. The scale of this animal waste is staggering: 130 times the waste generated by humans in the US each year.[8]
- The intensive use of antimicrobials (including antibiotics) is an integral feature of industrial animal agriculture. There is growing evidence that animal use of antimicrobials is tied to the evolution of multiple drug resistance in food-borne disease agents and the loss of efficacy of drugs important in human medicine.[9]

Since 1945, agricultural acreage in Massachusetts has decreased by more than 1.5 million acres—an area twice the size of Rhode Island.

Between 1964 and 1997 Rhode Island's farmland acreage was nearly cut in half, going from 103,801 acres to only 55,256 acres. Rhode Island developed more residential, commercial, and industrial land in the last four decades than in its first 325 years.[9]

Buying local can make a big difference to the viability of local farmers. New England farmers receive only 21 cents for every dollar a consumer pays in the supermarket. Take this example from Essex County in Massachusetts:
If an additional 1% of the residents of Essex County will spend $12 a week during the growing season at farm stands, farmers' markets and Community Supported Agriculture farms, the net income of Essex County farmers can increase by 50%, this will help them stay in business. Fifty-one percent of the farmers experienced net losses according to the last agricultural census and the net cash returns from agricultural sales averaged only $23,055 per farm, so a small shift in consumer buying habits can play a major role in keeping farms profitable.[10]

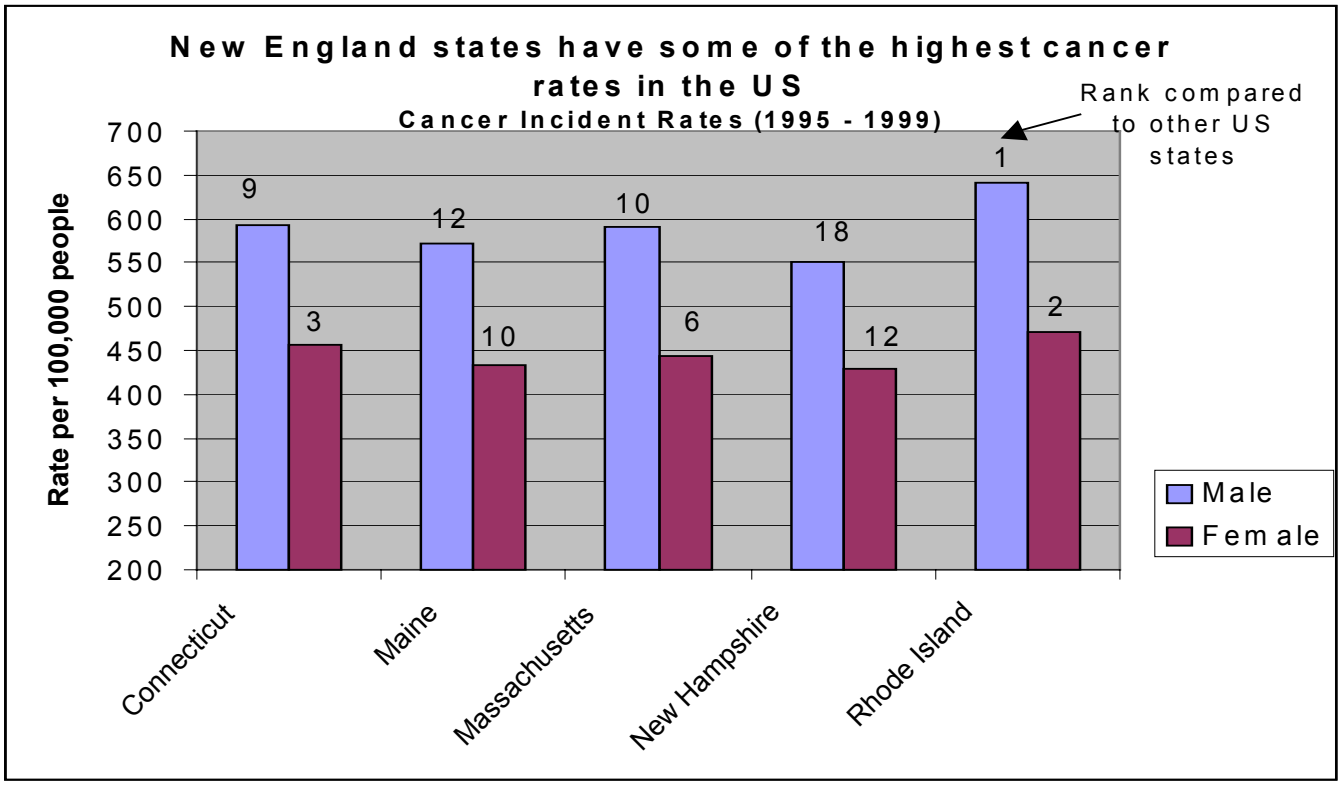
Environmental Impacts of Food Choices

According to the British group Vegfam, a 10-acre farm can support 60 people growing soybeans, 24 people growing wheat, 10 people growing corn and only two producing cattle. Britain—with 56 million people—could support a population of 250 million on an all-vegetable diet. Because 90 percent of U.S. and European meat eaters' grain consumption is indirect (first being fed to animals), westerners each consume 2,000 pounds of grain a year. Most grain in underdeveloped countries is consumed directly.[11]

Tufts University nutritionist Jean Mayer estimates that reducing meat production by just 10 percent in the U.S. would free enough grain to feed 60 million people. Authors Paul and Anne Ehrlich note that a pound of wheat can be grown with 60 pounds of water, whereas a pound of meat requires 2,500 to 6,000 pounds.[12]

More than a third of all raw materials and fossil fuels consumed in the U.S. are used in animal production. Beef production alone uses more water than is consumed in growing the nation's entire fruit and vegetable crop. Producing a single hamburger patty uses enough fuel to drive 20 miles and causes the loss of five times its weight in topsoil. In his book *The Food Revolution*, author John Robbins estimates that "you'd save more water by not eating a pound of California beef than you would by not showering for an entire year." [12]

Virtually all chickens today are factory raised, with as many as six egg-laying hens living in a wire-floored "battery" cage the size of an album cover. As many as 100,000 birds can live in each "henhouse." Conditions are so psychologically taxing on the birds that they must be debeaked to prevent pecking



injuries.[12]

5 to 6 billion pounds of insecticides, herbicides, fungicides, rodenticides, and other biocides are dispersed each year, with roughly a quarter of this released or sold in the US. Of the 325 active pesticide ingredients allowed by law to persist on food, roughly one-third are suspected of causing cancer in lab animals, another third may disrupt the nervous system, and others are suspected of interfering with the hormone system.[12]
Source: Cancer Facts and Figures 2003, American Cancer Society, statistics for Vermont not available

HOME IMPACTS

In the US, the built environment accounts for one-third of all energy, water, and materials consumption and generates similar proportions of pollution.[13]

There is a loss of 1,200 acres of open space a week to development in New England
Between 1950 and 1990,
Massachusetts population grew 28%.
Population in every city in the Commonwealth decreased.
The amount of developed land increased by 188% (6 times the population growth).

DISCUSSION QUESTIONS

For what various reasons did the writers of the Bible object to people's fondness for material goods? Why do we do so now?

How might your life be worse if you had fewer material goods? A smaller living space? How might it be better?

As one of many creatures, our scriptures inform us that humans are stewards of God's Creation. What might you need to know and understand in order to care wisely for your charge?

What needs to happen to restore a right relationship between humankind and creation?

In what ways are we all connected? Who is our neighbor?

How can we address the impacts of our choices in ways that strengthen our ability to fully meet human needs, and at the same time care for the creation?

How might my personal and work-life actions play a role in impacts of consumer choices?

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[1] US EPA document: *The Quest for Less*

[2] Drawn from (with additions by SSNE) *The Consumer's Guide to Effective Environmental Choices* by Michael Brower and Warren Leon, Three Rivers Press, 1999

[3] Burlington Eco Info http://www.uvm.edu/~empact/air/index.php3

[4] Maine Environment 2002 http://www.state.me.us/dep/pubs/environment2002.pdf

[5] Surface Transportation Policy Project, www.transact.org – searchable database by metro area

[6] Home Grown**,** Brian Halweil

[7] Sierra Club fact sheet Clean Water & Factory Farms

[8] NRDC Report: America's Animal Factories

[9] Sierra Club of Rhode Island, Costs of Sprawl report

[10] www.buyfresh.org

[11] E Magazine, The Case Against Meat, Jan-Feb 2002

[12] *Our Children's Toxic Legacy*, John Wargo

[13] US Green Building Council www.usgbc.org

FOCUS TOPIC FOR SESSION THREE:

ENVIRONMENTAL JUSTICE

"What people don't understand is – they say we live in Roxbury and we're poor, but for people in Roxbury that's not their whole being! Quality of life is what we're concerned with – about having clean streets; knowing our children are healthy, that they go to good schools; that our families are happy. That's what makes us rich. A whole lot of stuff doesn't make us rich."

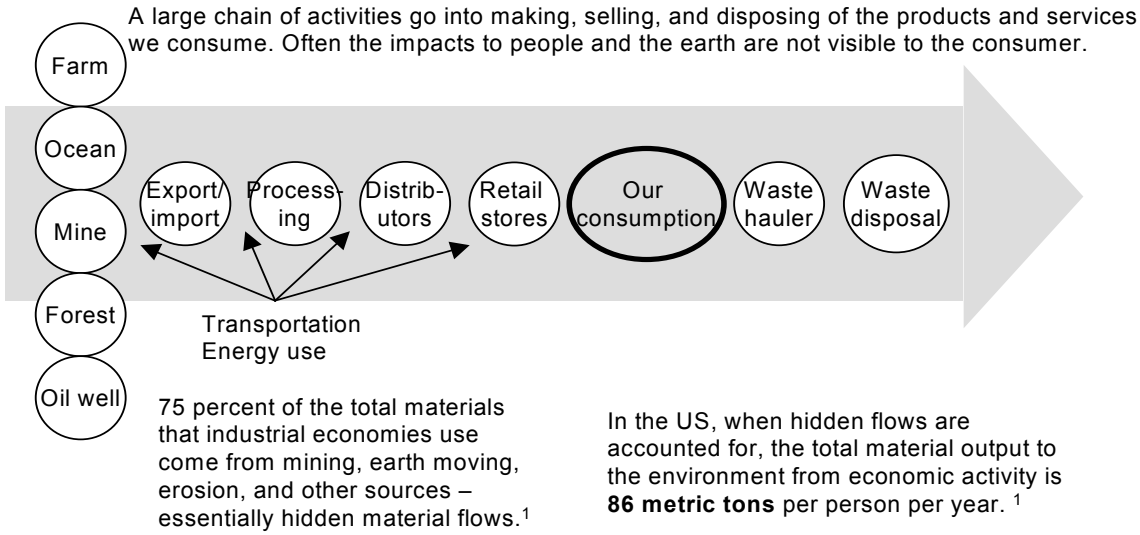
(Parishioner, St. Paul's Cathedral, Boston, MA)

Think of a time when you recognized or thought about what happened before something you consume got to you; e.g., who made your shoes? Where did these materials come from?

Imagine if the following materials were delivered to your front yard each year (these figures present what the average American household consumes per year):

- Just over 1,000 gallons of gasoline (imagine 18 55-gallon drums)
- About 5,000 pounds of coal for household electricity
- About 20 tons of animal waste associated with food production[1]

What might be unseen impacts to the earth and its people associated with our consumption?



Source of statistics: World Resources Institute[2]

How would it affect our choices if we viewed the people and environment that contribute to the products and services we consume as our neighbor?

WHO BEARS THE COSTS ASSOCIATED WITH CONSUMPTION?

Much of the environmental and human impact of the material flows associated with sourcing and manufacturing raw materials occurs outside industrialized countries since many raw materials are imported. Reports from local health, labor, and housing departments since the 1930's, and similar national agencies since the 1960's, indicate that environmental disease is a greater threat to low-income communities of color than other communities.

Low income, and quite often culturally diverse populations, are more likely than other groups to live near landfills, incinerators, and hazardous waste treatment facilities. For example, Hartford, Connecticut is the country's 8th poorest city (as of 1995, 62% of Hartford's population was living in poverty). According to the most recent census figures available, Hartford has a population of approximately 130,000 people. Of that number, 70% are people of color, with 36% black and 34% Latino. Connecticut burns more of its garbage than any other state (82%). Hartford has the largest trash-to-energy incinerator in the state and burns trash from 66 Connecticut towns, Vermont, Massachusetts, and New York City. More than 35 cities and towns in Connecticut, Massachusetts, and Rhode Island ship their sludge to Hartford's eight regional waste facilities.[3]

Low-income communities of color are limited by fewer environmental benefits (e.g., clean air, water, and land) and more environmental threats (e.g., hazardous chemicals and environmental illness). Such limits triggered the environmental justice movement. Understanding how such limits are created, maintained, and interact to create environmental illness in low-income communities of color helps environmental justice activists and environmental health professionals develop better solutions.

A LOCAL EXAMPLE FROM BOSTON

Environmental burdens documented in Roxbury include high levels of toxic diesel emissions from public transit bus fleets and commercial trucks, many of which return to and leave from the neighborhood each day due to the location of bus barns and parking lots. Racial disparities in rates of asthma show that children in Roxbury suffer five times the state average. High rates of childhood lead poisoning and fewer acres of public open space per capita than would be anticipated by the neighborhood's high concentration of children and youth also characterize this urban neighborhood.[4]

FARM WORKERS

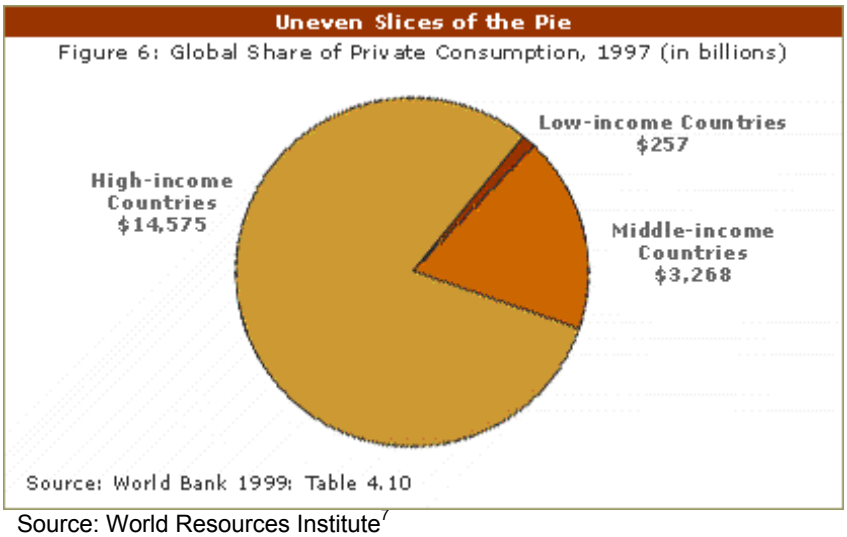
Approximately 90 percent of the 2 million hired farm workers in the United States are people of color, including Chicano, Puerto Ricans, Caribbean blacks and African Americans. Through direct exposure to pesticides, farm workers and their families may face serious health risks. It has been estimated that as many as 313,000 farm workers in the U.S. may suffer from pesticide-related illnesses each year.[5]

THE GEOGRAPHY OF ENVIRONMENTAL HAZARDS

Two researchers at Northeastern University conducted a study of 17 different types of environmentally hazardous sites and facilities in all 368 communities in Massachusetts[6] and found that:

- On average, communities with a median income of less than $30,000 face **three** times the cumulative exposure rate to all environmentally hazardous sites and facilities than all other communities in the state.
- Communities where more than 15% of the population were people of color average over **four** times the number of hazardous waste sites per square mile than communities where less than 5% of people are of color.
- Communities where more than 25% of the population were people of color face nearly **nine** times the cumulative exposure rate to all environmentally hazardous sites and facilities than communities where less than 5% of people are of color.

WHO GAINS THE BENEFITS OF CONSUMPTION?



Source: World Resources Institute[7]

Since 1950, the richest 20% of the world's population has increased its per capita consumption of meat and timber two-fold, its car ownership four-fold and its use of plastics five-fold. The poorest 20% has increased its consumption hardly at all.

The population of Bangladesh is increasing by about 2.4 million per year, while that of Britain is increasing by about 100,000 per year. Yet, because carbon dioxide emissions per person in Britain are 50 times higher than in Bangladesh, the 100,000 people in Britain cause more than double the carbon dioxide emissions of the 2.4 million people in Bangladesh.[8]

Better health is a benefit often tied to more income, more education, and better jobs, as well as living in communities where more people have higher incomes and more education. However, race, class, and gender discrimination in the U.S. makes better health difficult to attain for people in poor minority communities. Limits on housing choice, education, income and political power create environments for low-income communities of color that trigger disease. The end result is that people in low-income communities of color have less healthy surroundings, less education, and less income to support their personal health, and to fight for better healthcare, than people in other communities. People residing in low-income communities of color also die sooner.
The environmental health consequences of such limitations are substantial. Exposure to toxins are greater in low-income communities of color because they are often located in or near polluting industrial areas and consist of cheap older housing where lead paint and pests are a threat. Employment in low-income communities of color is often limited to jobs with low pay, no health benefits, and, sometimes, severe workplace dangers. Low-income communities of color receive less treatment for environmental disease because healthcare resources are limited and environmental health expertise is rare. Finally, when environmental health threats are not eliminated, the harm jumps from generation to generation.[9]

What are the equity issues here when we realize the costs and benefits of consumption are not equally shared?

What do these differences in consumption levels say about the leverage we have as Americans to reduce environmental harm associated with consumption?

– As of 1986, a scientific report from a Stanford University biologist estimated that humans are "appropriating," directly or indirectly, 40% of the products of terrestrial photosynthesis. In effect, humanity is channeling through its economy 40% of land-based biologic production. More recent work suggests human exploitation of the ocean's continental shelves is approaching similar rates.[10]

What are the implications for the earth if <u>one</u> species is consuming 40%?
What is our fair share compared to other species?
###

"<u>Environmental Exposures and Racial Disparities</u>"[11] is a racial analysis of the most comprehensive report to date documenting the environmental chemicals found in people living in the United States, the Centers for Disease Control and Prevention's "Second National Report on Human Exposure to Environmental Chemicals" (<u>National Report</u>). The National Report includes information on the concentration of 116 chemicals in Mexican Americans, Non-Hispanic Blacks and Non-Hispanic Whites. It also establishes a national baseline for 89 chemicals and updates the national baseline for 27 chemicals.

If all socioeconomic factors were equal, one might expect the concentration of environmental chemicals to be evenly distributed across a U.S. population that is approximately three-quarters White and one-quarter people of color. "Environmental Exposures and Racial Disparities" finds that the three categories where such a distribution is most closely paralleled are for naturally-occurring environmental chemicals (metals, phytoestrogens, and PAHs) people touch, eat, or breathe. However, synthetic chemicals that people touch, eat, or breathe (such as dioxins, PCBs, phthalates, pesticides, herbicides, pest repellants, and disinfectants) pose a greater burden to people of color.

Key findings for each racial group are as follows:

non-Hispanic Blacks are much more likely to be exposed to dioxins and polychlorinated biphenyls (PCBs) and are more likely to be exposed at higher levels;

Mexican-Americans are much more likely to be exposed to pesticides, herbicides, and pest repellants and are more likely to be exposed at higher levels;

non-Hispanic Whites are much more likely to be exposed to polycyclic aromatic hydrocarbons (PAHs) and phytoestrogens and are more likely to be exposed to phthalates at higher levels;

non-Hispanic Blacks and Mexican-Americans are much more likely to have higher levels of less common chemicals; and

non-Hispanic Blacks are exposed to the greatest number of chemicals in the study.

The CDC report is released every two years and will include findings from studies of people living in special-exposure situations (e.g., pesticide applicators, people living near hazardous waste sites, people working in lead smelters).

After the Opening, the facilitator and/or the group should quickly pick one or two questions from the list below for each participant to answer.

Discussion Questions
(The questions above are repeated, and more are added from which to choose.)

1. Share a story of a time when you recognized or thought about what happened before something you consume got to you; e.g., who made your shoes? where did these materials come from?

2. What might be unseen impacts to the earth and its people associated with our consumption?

3. What are the equity issues here when we realize the costs and benefits of consumption are not equally shared?

4. What do these differences in consumption levels say about the leverage we have as Americans to reduce environmental harm associated with consumption?

5. What are the implications for the earth if one species is consuming 40%?

6. What is our fair share compared to other species?

7. What environmental injustice might you have seen in your town, in your travels?

8. Environmental injustice is seen in some quarters as the next evolution of the social justice and environmental "movements." What might this mean for you personally, your faith community, your secular community and/or your workplace?

[1] Warren Leon, NESEA

[2] Wasting the material world: The impact of industrial economies. 75% figure based on a detailed study of Germany, Japan, the Netherlands, and the US shows that for highly industrialized economies. Updated material from World Resources 1998-99; excerpts from Resource Flows: The Material Basis of Industrial Economies and The Weight of Nations: Material Outflows from Industrial Economies, by World Resources staff

[3] www.healthy.hartford.gov

[4] Boston Indicators Report, 2002

[5] EPA Environmental Justice Home page: http://www.epa.gov/compliance/resources/faqs/ej/index.html

[6] *Unequal Exposure to Ecological Hazards: Environmental Injustices in the Commonwealth of Massachusetts,* by Daniel Faber and Eric Kreig, Northeastern University

[7] How Much Do We Consume? *World Resources 2000-2001* By Gregory Mock, June 2000

[8] *National Academy of Sciences, Towards Sustainable Consumption*

[9] http:/www.ejhu.org/disparities.html

[10] Our Ecological Footprint, Wackernagel & Rees

[11] http:/www.ejhu.org/disparities.html

SESSION FOUR

NEXT STEPS; BECOMING BETTER STEWARDS

The Pastoral Letter calls on us to:

- *lift up prayers in personal and public worship for environmental justice, human rights, and sustainable development*
- *realize that, through participation in community, public policy, and business decision-making, we have corporate as well as individual opportunities to practice environmental stewardship and justice*

OPENING PRAYERS

Have individual voices take turns reading the plain text sections; the group as a whole can read the boldface sections.

O God, you are the root and the offspring of David, the bright morning star. Guide us by your light to find our roots in the good earth you have created, that provides all that we need. [Rev. 22:16]

O God, you are the branch from Jesse's stem that survives and grows from a forest that has been cut down and burnt. Show us the hope of new growth even amid death and destruction. [Isa. 10:18-19, 33-34, 11:1]

O God, you plant us as a cedar tree on a high and lofty mountain. Strengthen us to produce branches and bear fruit, so that birds of every kind will nest in our shade. [Ezek. 17:22-23]

O God, you are the vine and we are the branches. Root us in your love and let your power run through us like sap and bear fruit in works of justice, mercy, and love. [John 15:5]

Blessed are those who trust in the Lord. They shall be like a tree planted by water, sending out its roots by the stream. It shall not fear when heat comes, and its leaves shall stay green; in the year of drought it is not anxious, and it does not cease to bear fruit. [Jer. 17:8]

O God, you are the Spirit who blows through us like a wind, sweeping away doubt and hesitation. Inspire us with your power to preach good news to all people. [Acts 2:2]

O God, your kingdom is like the mustard seed. Plant that tiny seed in our hearts; let it find rich soil there, that it may grow and become the greatest of all shrubs. [Luke 13:18-19]

O God, you are the living water that takes away thirst forever. Water us with your never-failing love, that we may be springs of refreshment to others and to your earth. [John 7:37]

O God, you have grafted all the nations onto the olive tree of your people. Let us grow together into a single strong tree until greed and conflict cease and your kingdom is securely planted. [Rom. 11:17-24]

Neither the one who plants nor the one who waters is anything, but only God who gives the growth. The one who plants and the one who waters have a common purpose, and each will receive wages according to the labor of each. For we are God's servants, working together; you are God's field, God's building. [I Cor. 3:7-9]

O God, you are the Spirit who descends on us like a dove. Comfort us in the shadow of your wings. [Ps. 17:8]

O God, you are the good shepherd of the sheep. You make us lie down in green pastures and lead us beside still waters. Grant that we may be, not thieves and false shepherds, but faithful members of the flock, to do your work in the world. [John 10:11; Ps. 23]

O God, you are the Lion of the Tribe of Judah, and the Root of David, and the Lamb that was slain. You are the lion and the lamb and the love that is between them when they lie down together in your kingdom of peace. Fill us with the strength of the lion, the innocence of the lamb, and the passion of your love for the world you have made. [Isa. 11:6, Rev. 5:5-6]

O God, the leaves of the trees of your kingdom spring from the water of life and bring the healing of the nations. Heal us and heal the earth, until the earth is as full of the knowledge of you as the waters cover the sea, and a canopy of breathing, cooling green once more mantles this fragile planet, bringing healing, and life, and peace. [Isa. 11:9, Rev. 22:1-2]

Unless a grain of wheat falls into the earth and dies, it remains just a single grain; but if it dies, it bears much fruit. [John 12:24]

O God, plant in us the knowledge of your sacrificial love and that of all living things that die to give us life. Raise us up to offer our lives to you for the good of all creation. And at the final harvest, bring us into your kingdom to live in the life that died and rose again.

OPENING

(Described in Session One and in the Introduction)

DISCUSSION

Pick one or two of the following questions, and have each participant give their answer:

"Lift up prayers in personal and public worship for environmental justice, human rights, and sustainable development"

How can we live our faith in relationship with God's creation?

What can we do to become more aware of the beauty and wonder of God's creation?

"Realize that, through participation in community, public policy, and business decision-making, we have corporate as well as individual opportunities to practice environmental stewardship and justice"

What can we do as a faith community immediately and in the short run to be better stewards? In the long term?

How can stewardship of the Earth be integrated into our life as a church?

How might the various commissions, committees and programs of our church incorporate better stewardship practices? (i.e. Buildings and Grounds, Finance, Education, Fellowship, Liturgy, Music). Brainstorm ways in which caring for creation might be expressed in these areas.

EVALUATION

Now that you have had the experience of this study, are there ways in which you see yourself differently in relationship with *God* and God's creation?

What affected you most over the past three sessions? The prayers? The stories? The issues and information? What do you feel passionate about?

Distribute the Evaluation Forms and have the participants fill them out before closing prayers

CLOSING PRAYERS

In preparation each the member of the circle is asked to write on a 3X5 card what he or she feels passionate about and an action to which they are ready to commit.

On the reverse side each person addresses this card to themselves. The cards will be placed in a basket during the service and mailed in one month as a reminder.

Prayers of Praise and a Litany of Commitments
Towards an Ethic of Environmental Responsibility

God of all power, Ruler of the Universe, you are worthy of praise. At your command all things came to be: the vast expanse of interstellar space, galaxies, suns, the planets in their courses, and this fragile earth, our island home. By your will they were created and have their being. From the primal elements you brought forth the human race, and blessed us with memory, reason and skill. But we turned against you, and betrayed your trust; and we turned against one another. Again and again you call us to return. Today you call us to return and we turn to you with these our commitments to action:

One by one, each person in the circle reads his or her commitment to action, followed by:

Lord have mercy.

The group responds:
The Lord will guide you continually

All: **The Lord will guide you continually. You shall be like a watered garden, like a spring of water whose waters never fail. Your ancient ruins shall be rebuilt. You shall be called the repairers of the breach. Alleluia, Alleluia.**

One of the following hymns may then be sung:
1982 -- 8, 14, 291, 376, 385, 398, 400, 405, 406, 409, 424, 428, 431

The first prayer of this Closing Worship is adapted from the Book of Common Prayer, Eucharistic prayer C. The final prayer is based on Isaiah 58:11-12.

READINGS

A: EPA Energy Star for Congregations

Success Stories*

St. Paul's Episcopal Church

St. Paul's Episcopal Church, in Dedham, Massachusetts, has been in existence since before the American Revolution. The 8,000 square foot, 150-year old stone church is a beautiful example of 13th century English Gothic design, but not a good example of 21st century energy efficiency.

Several years ago the lay and clergy management group of the church decided to evaluate energy costs and usage, and take action to make improvements. These improvements are saving the church $16,000 annually on its electric bills, and more than 158,000 kWh of electricity saved is preventing over 273,000 pounds of CO2 emissions per year. They began by aggressively managing temperature profiles in the church's facilities with programmable thermostats. With a rebate from NStar, its electric and gas utility, St. Paul's upgraded ballasts, added new fluorescent fixtures, and installed compact fluorescent lamps (CFLs). Other lighting upgrades included adding outdoor lights with timers and light sensors in the parking area and installing timers on bathroom lights. A maintenance "tune-up" was performed on the heating system, which cleared blocked heat ventilator grates and removed dust and debris from cold air return ducts. As part of a capital improvement and expansion program, the church building was converted from oil to clean burning natural gas with a new, highly efficient direct-vent two-stage boiler. St. Paul's has participated in several energy audits and incorporated priority recommendations such as replacing two sets of old metal-framed windows with vinyl thermopane replacement windows.

Stuart Skinner Jr., St. Paul's Property Committee Chairman, gives this advice to others, "Tackle the simple and obvious things first, and plan a phase-in of the more difficult and expensive improvements. Develop a preventive maintenance plan and live by it, and update it often."

United Parish of Lunenburg

Stewardship of natural resources is the primary reason that the United Parish of Lunenburg, located in Lunenburg, Massachusetts, decided to implement energy-efficient improvements. The 11,500 square foot church was built in 1840 and is now designated a historic building. The parish upgraded the insulation in the attic and walls of the church. New energy-efficient windows were installed and the entry doors were rebuilt. As part of a lighting upgrade, the congregation installed compact fluorescent lamps (CFLs), T-8 fluorescent lamps, high-pressure sodium lamps, and light-emitting diode (LED) exit signs. In addition, the heating system was converted from oil to cleaner burning natural gas. The various upgrades were financed by the local utility, capital campaigns, memorial funds, and maintenance budgets. In total, the congregation is preventing about 26,000 pounds of CO2 per year, and saving nearly 15,000 kWh of electricity. This savings has reduced the parish's energy bill by about $1,500 per year. According to Art Cox, Chairperson of United Parish's Buildings and Grounds, "Much of what we are doing is for the long term, for preservation and to conserve our natural resources as best we can."

Adat Shalom Reconstructionist Congregation

The 28,000 square foot Adat Shalom synagogue in Bethesda, Maryland was built in 2001, with design emphasis on the spiritual and communal values of the congregation, including the importance of environmental stewardship. The physical expression of these values in the facility itself has attracted many new members, and reinforced the congregation's understanding of stewardship. The congregation has received enthusiastic media attention for its environmentally friendly building design, the building has become a major source of pride among congregants, and inspired community interest in efficiency. The facility has higher than average occupancy due to an active calendar of congregational functions, such as night and weekend meetings in offices, educational programs, and social events.

While designing the heating and air conditioning system, the building was divided into seven zones, all controlled by ENERGY STAR labeled programmable thermostats. The social hall uses passive solar design, with high

windows facing southward and an outside overhang. The social hall's floor is concrete with dark tiles to absorb heat. All appliances in the building are ENERGY STAR labeled appliances, and the construction materials used were often made from recycled materials, or wood harvested from certified sustainable forests.
Additionally, while installing the drip irrigation system for the landscaping, a rain sensor was attached to the irrigation timer, so that the system does not come on if the soil is adequately moist.
Natural daylighting provides much of the necessary illumination, and compact fluorescent lamps (CFLs) were used in nearly every wing of the building. Light-emitting diode (LED) exit signs were installed in all necessary areas. Exterior and parking lot lights are on timers, and are fully shielded from above so that they project only downward. This directs all illumination where it is needed, and prevents "light pollution" into the night sky. In addition, the Eternal Light (Ner Tamid) is solar powered, and connected directly to a photovoltaic cell on the roof. These improvements have resulted savings of nearly $2000 annually for reductions of about 19,500 kWh of electricity and nearly 600 therms of natural gas, which total almost 48,000 pounds of CO2 emissions each year.

First United Church of Christ

Energy efficiency upgrades at the First United Church of Christ, located in Edensburg, Pennsylvania, help the 70,000 square foot church save approximately $2,800 annually on energy bills. To achieve these savings, the Trustee Board voted to replace inefficient lighting with compact fluorescent lamps (CFLs), T-8 fluorescent bulbs and electronic ballasts, and to update the heating system, improve the insulation, and replace old, inefficient windows.
"First United has come a long way," says Howard Turndine, a member of the church Trustee Board. "At one time, we were holding services in the education building during the winter because the furnace system was inefficient and inadequate." Significant donations from the congregation started the ball rolling on upgrades, and it just kept going. Now the church sanctuary can be used year round, because the new furnace system, windows, and energy management system keep the temperature constant and comfortable. The more than 6,000 kWh of electricity and nearly 3,000 therms of natural gas the church is saving will prevent over 47,000 pounds of CO2 emissions annually. As an added benefit, "Energy efficiency upgrades installed in the church inspired others in the community to become better environmental stewards," says Howard Turndine.

Region 5
Saint Andrew's Lutheran Church

Shannon Vujnovich, St. Andrew's Lutheran Church's building manager, proved that environmental stewardship is a priority of the church by installing energy-efficient technology in the nearly 18,000 square foot facility. Replacing half of the lighting with compact fluorescent lamps (CFLs), and T-8 fluorescent lamps with electronic ballasts, produced considerable energy savings. All the thermostats were replaced with programmable models, which help keep the building at a more constant temperature, with increased comfort. In addition, the church turned down its water heater temperature for both safety and savings, applied weather stripping to the doors, replaced some of the windows with new energy-efficient windows, including storm windows, and improved the insulation. High-efficiency fan and pump motors also help increase the effectiveness of the new, high-efficiency heating and air conditioning systems. Due to these upgrades, St. Andrews, located in Wausau, Wisconsin, saves approximately $5,000 annually on its energy bills, and the 82,600 kWh of electricity being saved prevents about 164,300 pounds of CO2 emissions per year. According to Vujnovich, "In addition to saving church funds and preventing pollution, the energy-efficient technologies installed have longer warrantees and will last longer than conventional technology, so what more could you ask for?"

**To access the Energy Star for Congregations webpage go to: http://208.254.22.7/index.cfm?c=small_business.sb_congregations.*
There you will be able to download at no cost a copy of the manual Putting Energy Into Stewardship

B: The Best City In The World?

Making a solid case for better urban planning
by Donella Meadows
can be found on the web at:
http://context.org/ICLIB/IC39/Meadows.htm

Parish Environmental Audit

These pages outline a simple environmental audit that your church can conduct to measure its progress in meeting our Christian commitment to care for the earth.

First a team is gathered to conduct the audit. This team can be made up of vestry members, members of your environment committee, youth from the youth group or children from Sunday school classes or any members with an interest.

To conduct the audit, the audit team can review the church's procedures by answering the following questions "yes" or "no."

Section I. Conservation:

Part A. Energy Conservation:

1. How much gas do we use?
2. Do we keep the thermostat at 68 or lower in the winter?
3. Are clean fuels (such as natural gas) used to provide heat?
4. Has caulking been applied around windows?
5. Has proper insulation been provided?
6. Do we keep the thermostat at 75 or higher in the summer?
7. Do we have vent fans to alleviate summer heat?
8. Do we use shades and other simple cooling devices?
9. Have we planted trees for shade?
10. Do we turn our heat and air conditioning off or to the minimal settings when the church is not in use?
11. How much electricity do we use?
12. Do we use energy saving light bulbs?

Part B. Water Conservation:

1. How much water do we use?
2. Do we practice water conservation all the time, not just when drought restrictions require it?
3. Do we collect rainwater for watering lawns and gardens?

Section II. Pollution:

Part A. Air Pollution:

1. Have we declared our church a smoke free zone?
2. Have we had our air checked for asbestos, radon, and other pollutants?

Part B. Water Pollution:

1. Do we use alternative cleaners such as baking soda or vinegar?
2. Do we use natural alternatives to chemical pesticides, herbicides and fertilizers?
3. Do we avoid the use of toxic products- batteries, lawn chemicals, oven cleaners and other toxic cleaners- whenever possible?
4. Do we dispose of toxic products through proper means as designated by our local government?
5. Have we had our water checked for lead content and other pollutants?

Part C. Solid Waste pollution:

1. Do we recycle: paper, cardboard, aluminum, glass and plastic?
2. Do we have a compost center for our yard waste?
3. Do we recycle our own paper by using paper scraps?
4. Do we use products, such as paper products, made from recycled material?
5. Do we use permanent ware or reusable plastic ware at coffee hour, church dinners and other functions?
6. Is the amount of food served at coffee hour, church dinners and other functions consistent with the need so that waste is minimized?
7. Do we buy our supplies in bulk in order to eliminate unnecessary packaging?
8. Do we make it a practice to buy products that can be reused or repaired?
9. Do we discard products only after their useful life is over?

Section III. Lifestyle:

Part A. Natural Resource Preservation:

If your church has large surrounding grounds:

1. Is part of our land used as a wildlife sanctuary, with native trees, shrubs and ground cover chosen to provide food and shelter for birds and small mammals and to reduce the need for water and fertilizer?
2. Would we consider making some of our land available as a community garden?

If your church has small surrounding grounds:

1. Do we have a wildflower patch or small area dedicated to preserving the natural environment?

Part B. Traveling:

1. Are parishioners encouraged to carpool or walk whenever possible?
2. Do we keep resource conservation, such as traveling miles, in mind when selecting and planning activities?

Part C. Activities:

1. Do we discuss the caring for creation on days such as the Rogation days and Harvest days and throughout the cycles of the seasons?
2. Do we sponsor coffee hour programs, adult and youth forums, and other programs on the environment?
3. Do we sponsor joint environmental activities with other churches or faith communities?
4. Do we support environmental organizations and activities in our area?

Section IV. Summary:

Total the questions answered "yes"

Total the number of questions answered "no"

Each question that was answered "yes" indicates that you are doing your part to uphold our Christian commitment to care for God's creation. Now the audit team can present to the church's vestry the items that were answered "no" and begin to plan ways in which these can be addressed.

Save this audit and try it again in one year to see how much progress you have made!

Congratulations

COORDINATOR'S AND FACILITATORS' GUIDE

REACHING PARTICIPANTS IN YOUR CHURCH COMMUNITY

Some of the ways in which the coordinator might encourage participation in the study are as follows:

- Suggest sermon topics for the Sunday prior to the Introductory Session
- Have the pastoral letter read aloud at the Sunday service
- Place a bulletin insert on the Sunday prior to the Introductory Session announcing the course
- Post or distribute the flyer provided at the end of this chapter
- Place an article about the course in your Church newsletter
- Prepare special Prayers of the People
- Attend a vestry meeting to ask for their support for the study
- Invite other Episcopal Churches in your Deanery to join
- Invite the youth and young adults in your church to attend
- Invite individuals who you think might have an interest

DISCUSSION CIRCLE LEADERSHIP AND PROCESS

The Circle is initiated and assisted by a Coordinator, who guides the group through the Circle process and material. After leading the first session, the Coordinator may ask each participant to commit to facilitating a session. The Facilitator assists small group discussion, and helps the group choose key questions for discussion and reflection. Simple facilitation guidelines are included, and no special skills are required.
Another option is for the coordinator of the study to facilitate all of the sessions.

The COORDINATOR
Receives training in the discussion circle process
Reads and becomes familiar with all the material
Initiates the formation of the circle
Conducts the initial meeting
Assigns and assists facilitators for remaining meetings
Monitors the process of each meeting and intervenes when necessary to keep the group on track

The FACILITATOR
Reads and becomes familiar with the material for one session
Leads group in opening and closing prayer
May read the DISCUSSION CIRCLE GUIDELINES aloud at the beginning of each meeting (optional)
Calls on person designated for opening story
Assists group in choosing key questions
Moderates discussion

GUIDELINES FOR WEEKLY FACILITATORS

-adapted (with permission) from material created by the Northwest Earth Institute

In order to create a collaborative learning environment, each session of the course is led by a facilitator, or a pair of facilitators, from the class. The role rotates to a new person (or a pair) each week. This allows each person to experience facilitating, and avoids a teacher-student atmosphere. The process followed in the course --discussion among equals-- is as important as the content.

The facilitator's principal role is to stimulate and moderate the discussion by asking questions, identifying key points, and managing the group process. Specifically, you make sure the discussion remains focused, and that each person has a chance to speak. You do not need to be an expert or even the most knowledgeable person about the session's topic If one or two people tend to dominate discussions, it can be helpful to suggest simply going around the circle for comments by everyone, and/or allocating a specific amount of time to each person, and having the person next to each speaker keep track of their time with a watch.

Each class starts with one or two Openings (see description below). Call on the designated volunteer before starting the discussion. If that volunteer is not present, ask someone else to do one.

Help the group choose one or two discussion questions for each session that everyone will address. It is better to have a meaningful discussion of a few aspects, than to cover too much ground quickly.

Ask people (reminding if necessary) to keep their answers brief and personal. The goal of the course is for participants to learn from themselves and from others in a comfortable setting. Any opinion or question is okay, with the exception of negative judgements about the course, the circle or the other participants. Constructive criticism of the Discussion Circle should be written and submitted using the evaluation form.

The focus should be <u>on personal reactions</u> to the readings, personal experiences and feelings --on the ideas expressed in the packet and amongst the participants. Comments might address what feelings and concerns the readings and questions raise for each participant, or what personal experiences influence how they understand the issue, i.e.

> "When I think about climate change and the sea levels rising, I worry about my parents and others living in Florida, and what may happen to them in a bad hurricane. And I think about the meaning in all of this for me as a Christian…"

Keep discussions focused on the session's topics. A delicate balance is best -- don't force the group to stick to the topic or the question in the course book, but don't allow the discussion to drift too far off.

Try to avoid the following pitfalls

- Speaking of geo-politics without grounding comment in one's own behaviors, experiences, feelings, opinions etc.
- Trying to achieve consensus. Consensus is not a goal. Disagreement among participants is expected.
- Trying to solve problems. The course is not for problem solving. The group should not attempt to solve the problems society or individual class participants, or determine how to convince friends and relatives that they should change in some way.
- Negative remarks, such as criticizing the writing style, each other's opinions, or absent members.

In contrast, try to remember:

- Coordinators and Facilitators are most effective when they act as resources, NOT as teachers or preachers. People learn best through self-discovery and discussion with others.
- Groups work best when they are inclusive and non-judgmental, reaching out to all people. Each person has enormous potential to become a better steward of creation.
- To work without expectations of others. The courses will impact people at different levels. It is important to affirm that each person's perspectives and choices are valid and valuable.

Be an active listener. You need to hear and understand what people say if you are to guide or participate in the discussion effectively. Listening carefully also sets a good example.

THE OPENING

The opening helps set the tone for the discussions. In selecting an Opening for the first class, you should seek to model the values and the collaborative learning environment we seek to create. Also, in order to encourage creativity, you might consider presenting an opening that is something other than reading from a book. A picture, a rock, a story, something that grows near your front steps, etc. are all good choices. You might keep a number of Openings handy, and see what strikes you in the moment as being appropriate to who's in the room. For purposes of modeling, it is also a good idea for the facilitator to keep the opening short, well under the five-minute suggested maximum. The Opening does not need to be a polished performance, nor should it present an unattainable standard of perfection. A simple, authentic opening will best encourage the participants to share of themselves.

This summary may be read and posted at the beginning of the first meeting to help set the right tone:

DISCUSSION CIRCLE GUIDELINES:

The process used to conduct this group seeks to model the same values we need in order to care for creation: Respect, care, and affirming the value of each creature. We do not need to come to agreement or consensus on the issues raised in the Pastoral Letter.
Rather, this is an opportunity for each of us to deepen our personal understanding of what it means to "Serve Christ In All Creation."

Participants are asked to
Speak as much from their own personal experience as possible, and to search out how their own faith and values relate to the issues being discussed.
Respect each other's time, opinions, and abilities.

In order to have a safe environment in which to examine our hearts, members of the group are asked to
Arrive on time to each meeting
Give your full attention to the speaker, allowing each person to speak until they are finished.
Refrain from criticizing and negative remarks
Refrain from giving advice to other participants
Refrain from speaking for so long that others don't have time to speak.
Respect each other's confidentiality, and not repeat a personal story without the permission of the person who tells it.
Share our own thoughts and feelings honestly, trusting that they will be respected by the other members of the group.

The purpose of such a personal approach is to allow each participant to deepen their understanding of the issue and what it means for them with respect to their faith and life as a whole. It allows each of us to choose to take action in ways that have the positive impacts in our own spheres of influence: within our church community, personal lives, neighborhoods and workplaces, but such action is not the purpose of the Discussion Circle, per se. The atmosphere of trust we seek to create here will help this circle evolve into a core group which can continue to seek ways to celebrate the gifts of creation and honor the sacredness of all creation as integral to the work of the church

“TO SERVE CHRIST IN ALL CREATION”

A Discussion Circle Program Presented by
Episcopal Province One and Sustainable Step New England*

A four session course of readings and discussion based on the Province One Bishops’ Pastoral letter on caring for God’s creation and on ideas that have contributed to people's growing interest in living a life of richness and integrity. This self-facilitated course offers an opportunity to better know and explore how you choose to serve Christ in all creation.

Topics include:
The Theological and Biblical Foundations for an Environmental Ethic
God’s Earth and All God’s Creatures in Peril
Understanding the Impact of Environmental Degradation
Climate Change
Impacts of Consumer Choices
Environmental Justice
Next Steps: Becoming Better Stewards

This course is designed to engage people of faith in conversation around scriptural and theological understandings, core values and spiritual connections with God’s creation.
The hope is that these discussion sessions will lead participants to find ways to act that preserve and protect God’s world while expressing gratitude for the gifts of creation.

An **INTRODUCTORY PRESENTATION** for those who might be interested in forming or joining a group will be held:

Date:

Time:

Location:

To RSVP or for more information, contact:

[Facilitator’s phone, email etc here]

*(*Sustainable Step New England’s mission is to significantly expand understanding of sustainability throughout the region, and to provide individuals and organizations with tools and resources for taking action.)*

COORDINATOR'S GUIDE TO THE

INTRODUCTORY MEETING

The Introductory Meeting *is offered by the Coordinator one to two weeks prior to the commencement of the Discussion Circles. This Introductory Meeting can be held after or between Sunday services. The presenter or organizer of this session has the following goals:*

- *Describe the purpose of the Study guide and the discussion circles*
- *Describe the process involved in the discussion course*
- *Describe the content of the course being offered*
- *Coordinate the organization of the discussion group meetings*

Preparation for the Meeting:

- *See the Introductory material for suggestions on "Reaching Participants: Your Church Community"*

- *Have the following materials with you;*
  - *Copies of the Pastoral Letter "To Serve Christ In All Creation."*
  - *Copies of THE FOUR SESSIONS found in this chapter*
  - *Copies of the Study Guide*
  - *A class organizing sign up sheet*

- *Review the discussion questions below and select one to use with the group*
- *Arrive at least five minutes early to greet each person*
- *Introduce yourself to the group. You may wish to say a few words about how you came to volunteer to organize this study.*

OPENING PRAYER

Choose one of the following to open this session:

At Your command all things came to be, the vast expanse of interstellar space, galaxies, suns, the planets in their courses, and this fragile earth, our island home. Renew in us a right spirit toward the nurture of this fragile earth; open our hearts that we may be willing and faithful stewards of your gift of life and our blessed home. Strengthen us with your Holy Spirit and awaken in us the love which Jesus Christ, our Lord and Savior, revealed to us. *Amen*

Oh God, creator and sustainer of all; help us to see with new eyes and open hearts the wonder of all you have so graciously given us; create in us a new vision of what we may do to honor you and your creation, and send your Holy Spirit to fill us with joy and zeal to do your will. *Amen*

DESCRIBE THE COURSE AND THE DISCUSSION CIRCLE PROCESS

The coordinator, using the information in the Introductory Materials, gives a brief description of the program: Explain the mechanics of the course, time required, and how participants are involved in the course, the opening, method of facilitation, etc. (See the Introduction.)

Based on the Pastoral Letter, To Serve Christ in All Creation, the program seeks to increase awareness of environmental stewardship issues, celebrate the gifts of creation and take action to demonstrate gratitude for God's creation.

There are four sessions that are designed to last a minimum of 45 minutes each, though 90 minutes per session will allow participants a much deeper exploration of the issues..

Participants then take home their Study Guide and read the background material needed for the first session

The format is interactive and engages the participants in dialogue, small group discussion and reflection . The group time will be spent in discussion of the reading.

It is important that each person participate in each session in order to create a fun and meaningful experience for all; the people and the process are as important as the content.

Groups can have 5-12 participants; it is best if each person gets a total of 8-15 minutes to speak in the course of each session, so larger groups should ideally have longer gatherings. It is perfectly fine to create more than one circle per parish, in order to accommodate more people and or different meeting schedules.

DESCRIBE THE COURSE CONTENT

After describing the process, describe briefly the course content. Hand out a copy of THE FOUR SESSIONS found in this chapter. Go through it and say a little something about each session. This is not a time to try to teach the course.

THE OPENING

Each session begins with an Opening story (described in the Introduction). As an example, the coordinator, or a member of the group who has volunteered prior to the session, shares a 3-5 minute story,.

DISCUSSION

Select one of the following questions: (If it is a large group, 15 or more, break out into smaller groups of 3-5 for the discussion question.)
Have each person say their name and then answer one of the following questions, which the coordinator has selected before the meeting.

What is it that drew you to come today?

What is it about serving Christ in all creation that brought you here today?

What is a hope or concern that led you to come today?

Tell us about a person, place, event or experience that helped you develop your love for God's creation.

ORGANIZING THE CLASS

Leave enough time for those who are interested to sign up for the course and to find out how the group will proceed after this meeting is over. This may involve finding out who will participate, selecting a starting date, meeting place and time to meet. Pass around the sign up sheet. If it is possible, have the details worked out by the end of the meeting.

Participants should have a copy of the Pastoral Letter and the Study Guide, know where and when to meet next and know what to read for the first session. They may also, at this time, decide who will facilitate each session. If any of these things are not completed by the end of the meeting, the coordinator should take responsibility for completing them, including any necessary communications with the class participants.

CLOSING

Close on time:
Thank everyone for coming.
Be positive and encouraging.
Remind them to read the Pastoral Letter and Session One in their Study Guide.
Remind them when and where the first session will be.
Thank those who volunteered to facilitate and do the opening.

COORDINATOR'S CHECK LIST FOR

THE INTRODUCTORY MEETING

Take the following materials with you to the Introductory Meeting:

Copies of the pastoral letter
Copies of the study guide
Copies of THE FOUR SESSIONS found in this chapter
Sign up sheet
Newsprint and markers, or chalk and blackboard

Be sure to:

____ Arrive five minutes early. Put the agenda on a board or newsprint
____Greet each person as he or she arrives
____Introduce yourself and say something personal about why you are here
____Describe the purpose of the course
____Handout copies of THE FOUR SESSIONS found in this chapter
____Describe the course process and content
____Describe the Opening. Give an example
____Have a round of introductions with a discussion question
____Pass around the sign up sheet
____Pass out the copies of the Pastoral Letter to be read for the first session
____Pass out copies of the study guide; participants should know to read Session One in advance.
____Organize the date, time and place of the first session.
____Identify a facilitator and volunteer to do an "Opening" for the first session
____End on time

THE FOUR SESSIONS

OF THE DISCUSSION COURSE ON
THE NEW ENGLAND BISHOPS' PASTORAL LETTER

TO SERVE CHRIST IN ALL CREATION

Session One explores the pastoral letter's urging that we act together to honor the goodness and sacredness of God's creation, and to acknowledge the urgency of the planetary crisis. It provides a theological, spiritual and moral foundation for exploring sustainable, faithful living in ways that acknowledge our responsibility to care for God's creation. At the end, participants remind each other to read the Session Two background material.

Session Two explores the pastoral letter's urging that we seek to understand and uproot the political, social and economic causes of environmental abuse, to repent of greed and waste, and seek simplicity of life. It looks at "the big picture" of global environmental and social trends, and our individual and collective place in that picture, as people living in New England. It starts by providing a basic understanding of how the situation got to be as it is, provides some guiding principles for sustainable action, and ends by mentioning ways some individuals and organizations are addressing key issues. At the end, participants choose which of three optional Session Three topic areas to read. [If the group wishes to explore them all, they must decide which order to read and discuss them, and plan two additional meeting times.]

Session Three explores the pastoral letter's urging that we pray and take action to restore a right relationship between humankind and creation, commit ourselves to energy conservation and the use of sustainable sources of energy , and to reduce, reuse and recycle. It gives participants a chance to explore three topics: global climate change, consumer choice, and/or environmental justice. Each Discussion Circle will collectively choose one of these topics. At each group's discretion, they may add additional Sessions so that each of these three important topics can be discussed.

Session Four explores the pastoral letter's urging to realize that through participation in community, public policy, and business decision-making, we have corporate as well as individual opportunities to practice environmental stewardship and justice. It is a time for participants to explore how they might act to become better stewards of all Creation, both as a community of faith and as individual members.

EVALUATION

(adapted from material by the Northwest Earth Institute)

This discussion course has been developed by the Episcopal Province of New England with assistance from Sustainable Step New England, a 501c3 non-profit. Your comments will be used to determine how the course can be improved. Please complete this form and return it to:

Lynn Fulkerson, Committee on the Environment, Episcopal Diocese of Connecticut
176 Clark Rd
Litchfield, CT 06759
(860) 496-1427 or lynnfulk@rcn.com

1. Has the course made a difference to you? ____Yes ____ No
2. If so, how? Please describe any changes or impact, being as specific as possible, no matter how "small" the changes or impacts may seem.
   - ❑ Awareness raised _____
     _____
   - ❑ New goals established _____
     _____
   - ❑ Intend to make one or more changes in my life _____
     _____
   - ❑ Have made one or more changes in my life _____
     _____
   - ❑ Intend to help make one or more changes in my parish _____
     _____
   - ❑ Have helped make one or more changes in my parish _____
     _____
   - ❑ Substantial impact _____
     _____
   - ❑ Other _____
     _____
3. Which of the readings and discussion questions were most helpful to you, and why?
4. Which of the readings and discussion questions were least helpful to you, and why?
5. Suggestions for other materials (short articles, book chapters, graphics, etc.) to include:
6. What would make the discussion course better?