

# The Earth Is the Lord's



Psalm 24 Project  
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## Curriculum

# **The Earth Is the Lord's**

## **Psalm 24 Project**

A 3-Part Reflection on Humanity's Responsibilities to God's Creation

Part 1: What Is God's Ideal? pp. 2-3  
Part 2: Do Animals Have God-Given Rights? pp. 3-4  
Part 3: What Are the Implications for Humans? pp. 5  
Biblical Translations pp. 5-8  
Readings for Part 2 pp. 8-11  
Readings for Part 3 pp. 12-16

### **Part 1: What is God's Ideal?**

#### **Overview**

Many Christians regard humanity's "dominion" over God's Creation as a sacred responsibility to be good stewards. Yet, humanity is harming the environment and animals on a historically unprecedented scale. This series explores biblical teachings about our responsibilities to God's earth, and it aims to facilitate discussion and reflection about our God-given duties.

### **Part 1: What Is God's Ideal?**

Video (1:41)

#### **Introduction – Blessings and Curses**

Human free will means that people have opportunities to do what they want, even if they go against God's desires. Consequently, the Bible describes many examples of God giving humanity permission to do things, but the Bible often makes clear the consequences of going against God's will. For example, read 1 Samuel 8:10-22, in which God grants the Hebrews their request for a king, but warns that a king will abuse them.

#### **Is human free will a blessing or a curse?**

Read the blessings in the Beatitudes (Matthew 5:1-11). Jesus then describes what befalls those who do not abide by the teachings of the Sermon on the Mount, for example Matthew 7:1-2 and 7:24-27. Can you think of ways that people today or in the Bible appear to have been punished for their sins (for example, God's punishing evil-doers)? Can you think of ways that people today or in the Bible appear to have been punished by their sins (suffering harmful consequences of their hurtful decisions).

Read:

Genesis 1:28-31 – God blesses Eden and creates a peaceful, harmonious world

Genesis 2:16-17 – warning not to eat of the tree of knowledge of good and evil

Genesis 3:14-19 – curses for Adam, Eve, and the serpent

What was the consequence, in terms of Adam and Eve’s relationship with the Garden and with animals, when they did not abide by God’s instructions?

What has happened to you, people you know, or people in the news who have not followed God’s teachings? (If discussing other people, please remain mindful of confidentiality issues.)

The Bible gives examples of humans using animals for human purposes. In what ways is this a blessing? Are humans sometimes harmed as a consequence of mistreating animals?

Read Isaiah 11:6-9, an end-of-time vision often called the “Peaceable Kingdom” or the “Realm of God.”

Jesus prayed, “Thy will be done on earth as it is in heaven.” Do you think this calls us to work towards the Peaceable Kingdom/Realm of God now?

What is the “knowledge of the Lord” (Isaiah 11:9)?

Reflect on Matthew 7:20-21 and Galatians 5:22-23. In thinking about how our lives might show the “fruit of the Spirit”;

Name three or more ways we can help make the world resemble that ideal in our communities.

Name three or more ways we can help make the entire world resemble that ideal.

## **Part 2: Do Animals Have God-Given Rights?**

Video (4:41 minutes)

### **Introduction**

There are numerous biblical passages dealing with animals, some describing kindness and compassion and others harsh treatment. The Bible relates humans using animals for food, labor, and sacrifices, often with divine approval, but the Bible does not permit cruelty to animals and, some have argued, the Bible does not endorse any unnecessary harm to animals. As we consider the passages below, we will reflect on the following questions: Does God care for animals? Can humans treat animals any way that humans desire, or do humans have special obligations or responsibilities? Do animals have God-given rights?

Read Genesis 1:20-22. Why does God bless the animals?

Read Genesis 1:26-31. What was the initial relationship between humans and animals in the Garden of Eden? What do you think is meant by “dominion” (1:26)?

Read Genesis 2:18-22.<sup>1</sup> Why do you think God create the animals?

In what ways have animals enriched your life?

Read Genesis 9:1-3. This is the first passage which describes humans having permission to eat animals. Why was permission given at this time? Thinking back to last session's discussions of blessings and curses, some people regard this passage as a blessing to eat animals, but some have noted that it comes with a curse in that animals will no longer be humanity's friends. What do you think?

Read Proverbs 12:10 and Psalm 145:9. Do these passages indicate God's concern for animals?

Read Ecclesiastes 3:20-21. What do you think is the fate of animals?

Read Matthew 6:26. What does this passage say about God's concern for humans and for animals?

Do you think animals have a God-given right to not suffer or be harmed unnecessarily?

Do you think animals have a God-given right to do the things God created them to do?

1. Most Bible translations indicate that God created animals to be companions and helpers for Adam. Animals did not fully meet Adam's needs, and consequently God created Eve. However, the New International Version does not lend itself to this interpretation. It reads:

<sup>2:18</sup>The Lord God said, "It is not good for the man to be alone. I will make a helper suitable for him." <sup>2:19</sup>Now the Lord God had formed out of the ground all the beasts of the field and all the birds of the air. He brought them to the man to see what he would name them; and whatever the man called each living creature, that was its name.

The King James Version reads: <sup>2:18</sup>And the LORD God said, It is not good that the man should be alone; I will make him an help meet for him. <sup>2:19</sup>And out of the ground the LORD God formed every beast of the field, and every fowl of the air; and brought them unto Adam to see what he would call them: and whatsoever Adam called every living creature, that was the name thereof.

The Revised Standard Version reads: <sup>2:18</sup>Then the LORD God said, "It is not good that the man should be alone; I will make him a helper fit for him." <sup>2:19</sup>So out of the ground the LORD God formed every beast of the field and every bird of the air, and brought them to the man to see what he would call them; and whatever the man called every living creature, that was its name.

## Part 3: What Are the Implications for Humans?

Video (1:43)

### Introduction

Many Christians believe that we are called to be good stewards of God's Creation. However, through pollution, global warming, and resource depletion, humanity has damaged God's earth. In today's session, we will consider whether we can find well-being while remaining mindful of the world's poor and hungry and of future generations.

Read Psalm 24:1 and Genesis 2:15

Do our responsibilities to serve God involve caring for the earth?

What are our obligations to future generations to preserve land, water, and energy resources?

What do you think are the most effective ways that we might preserve scarce resources, e.g. land, water, and energy?

What do you think are the most effective ways to reduce global warming?

Read 1 Corinthians 6:19

Do we have a sacred obligation to God to care for our bodies?

What changes can we make in our habits or lifestyles to preserve our health?

### Biblical Passages (Revised Standard Version)

#### Part 1

1 Samuel 8:10-22: <sup>10</sup>So Samuel told all the words of the LORD to the people who were asking a king from him. <sup>11</sup>He said, "These will be the ways of the king who will reign over you: he will take your sons and appoint them to his chariots and to be his horsemen, and to run before his chariots; <sup>12</sup>and he will appoint for himself commanders of thousands and commanders of fifties, and some to plow his ground and to reap his harvest, and to make his implements of war and the equipment of his chariots. <sup>13</sup>He will take your daughters to be perfumers and cooks and bakers. <sup>14</sup>He will take the best of your fields and vineyards and olive orchards and give them to his servants. <sup>15</sup>He will take the tenth of your grain and of your vineyards and give it to his officers and to his servants. <sup>16</sup>He will take your menservants and maidservants, and the best of your cattle and your asses, and put them to his work. <sup>17</sup>He will take the tenth of your flocks, and you shall be his slaves. <sup>18</sup>And in that day you will cry out because of your king, whom you have chosen for yourselves; but the LORD will not answer you in that day."

<sup>19</sup>But the people refused to listen to the voice of Samuel; and they said, "No! but we will have a king over us, <sup>20</sup>that we also may be like all the nations, and that our king may govern us and go out before us and fight our battles." <sup>21</sup>And when Samuel had heard all the words of the people, he repeated them in the ears of the LORD. <sup>22</sup>And the LORD said to Samuel, "Hearken to their voice, and make them a king." Samuel then said to the men of Israel, "Go every man to his city."

Matthew 5:1-11: <sup>1</sup>Seeing the crowds, he went up on the mountain, and when he sat down his disciples came to him. <sup>2</sup>And he opened his mouth and taught them, saying:

<sup>3</sup>"Blessed are the poor in spirit, for theirs is the kingdom of heaven.

<sup>4</sup>"Blessed are those who mourn, for they shall be comforted.

<sup>5</sup>"Blessed are the meek, for they shall inherit the earth.

<sup>6</sup>"Blessed are those who hunger and thirst for righteousness, for they shall be satisfied.

<sup>7</sup>"Blessed are the merciful, for they shall obtain mercy.

<sup>8</sup>"Blessed are the pure in heart, for they shall see God.

<sup>9</sup>"Blessed are the peacemakers, for they shall be called sons of God.

<sup>10</sup>"Blessed are those who are persecuted for righteousness' sake, for theirs is the kingdom of heaven.

<sup>11</sup>"Blessed are you when men revile you and persecute you and utter all kinds of evil against you falsely on my account.

Matthew 7:1-2: <sup>1</sup>Judge not, that you be not judged. <sup>2</sup>For with the judgment you pronounce you will be judged, and the measure you give will be the measure you get.

Matthew 7:24-27: <sup>24</sup>Every one then who hears these words of mine and does them will be like a wise man who built his house upon the rock; <sup>25</sup>and the rain fell, and the floods came, and the winds blew and beat upon that house, but it did not fall, because it had been founded on the rock. <sup>26</sup>And every one who hears these words of mine and does not do them will be like a foolish man who built his house upon the sand; <sup>27</sup>and the rain fell, and the floods came, and the winds blew and beat against that house, and it fell; and great was the fall of it."

Genesis 1:28-31: <sup>28</sup>And God blessed them, and God said to them, "Be fruitful and multiply, and fill the earth and subdue it; and have dominion over the fish of the sea and over the birds of the air and over every living thing that moves upon the earth." <sup>29</sup>And God said, "Behold, I have given you every plant yielding seed which is upon the face of all the earth, and every tree with seed in its fruit; you shall have them for food. <sup>30</sup>And to every beast of the earth, and to every bird of the air, and to everything that creeps on the earth, everything that has the breath of life, I have given every green plant for food." And it was so. <sup>31</sup>And God saw everything that he had made, and behold, it was very good. And there was evening and there was morning, a sixth day.

Genesis 2:16-17: <sup>16</sup>And the LORD God commanded the man, saying, "You may freely eat of every tree of the garden; <sup>17</sup>but of the tree of the knowledge of good and evil you shall not eat, for in the day that you eat of it you shall die."

Genesis 3:14-19: <sup>14</sup>The LORD God said to the serpent, "Because you have done this, cursed are you above all cattle, and above all wild animals; upon your belly you shall go, and dust you shall eat all the days of your life. <sup>15</sup>I will put enmity between you and the woman, and between your seed and her seed; he shall bruise your head, and you shall bruise his heel." <sup>16</sup>To the woman he said, "I will greatly multiply your pain in childbearing; in pain you shall bring forth children, yet your desire shall be for your husband, and he shall rule over you." <sup>17</sup>And to Adam he said, "Because you have listened to the voice of your wife, and have eaten of the tree of which I commanded you, 'You shall not eat of it,' cursed is the ground because of you; in toil you shall eat of it all the days of your life; <sup>18</sup>thorns and thistles it shall bring forth to you; and you shall eat the plants of the field. <sup>19</sup>In the sweat of your face you shall eat bread till you return

to the ground, for out of it you were taken; you are dust, and to dust you shall return.”

Isaiah 11:6-9: <sup>6</sup>The wolf shall dwell with the lamb, and the leopard shall lie down with the kid, and the calf and the lion and the fatling together, and a little child shall lead them. <sup>7</sup>The cow and the bear shall feed; their young shall lie down together; and the lion shall eat straw like the ox. <sup>8</sup>The sucking child shall play over the hole of the asp, and the weaned child shall put his hand on the adder’s den. <sup>9</sup>They shall not hurt or destroy in all my holy mountain; for the earth shall be full of the knowledge of the LORD as the waters cover the sea.

Matthew 7:20-21: <sup>20</sup>Thus you will know them by their fruits.

<sup>21</sup>”Not every one who says to me, ‘Lord, Lord,’ shall enter the kingdom of heaven, but he who does the will of my Father who is in heaven.

Galatians 5:22-23: <sup>22</sup>But the fruit of the Spirit is love, joy, peace, patience, kindness, goodness, faithfulness, <sup>23</sup>gentleness, self-control; against such there is no law.

## Part 2

Genesis 1:20-22: <sup>20</sup>And God said, “Let the waters bring forth swarms of living creatures, and let birds fly above the earth across the firmament of the heavens.” <sup>21</sup>So God created the great sea monsters and every living creature that moves, with which the waters swarm, according to their kinds, and every winged bird according to its kind. And God saw that it was good. <sup>22</sup>And God blessed them, saying, “Be fruitful and multiply and fill the waters in the seas, and let birds multiply on the earth.”

Genesis 1:26-31: <sup>26</sup>Then God said, “Let us make man in our image, after our likeness; and let them have dominion over the fish of the sea, and over the birds of the air, and over the cattle, and over all the earth, and over every creeping thing that creeps upon the earth.” <sup>27</sup>So God created man in his own image, in the image of God he created him; male and female he created them <sup>28</sup>And God blessed them, and God said to them, “Be fruitful and multiply, and fill the earth and subdue it; and have dominion over the fish of the sea and over the birds of the air and over every living thing that moves upon the earth.” <sup>29</sup>And God said, “Behold, I have given you every plant yielding seed which is upon the face of all the earth, and every tree with seed in its fruit; you shall have them for food. <sup>30</sup>And to every beast of the earth, and to every bird of the air, and to everything that creeps on the earth, everything that has the breath of life, I have given every green plant for food.” And it was so. <sup>31</sup>And God saw everything that he had made, and behold, it was very good. And there was evening and there was morning, a sixth day.

Genesis 2:18-22: <sup>18</sup>Then the LORD God said, “It is not good that the man should be alone; I will make him a helper fit for him.” <sup>19</sup>So out of the ground the LORD God formed every beast of the field and every bird of the air, and brought them to the man to see what he would call them; and whatever the man called every living creature, that was its name. <sup>20</sup>The man gave names to all cattle, and to the birds of the air, and to every beast of the field; but for the man there was not found a helper fit for him. <sup>21</sup>So the LORD God caused a deep sleep to fall upon the man, and while he slept took one of his ribs and closed up its place with flesh; <sup>22</sup>and the rib which the LORD God had taken from the man he made into a woman and brought her to the man.

Genesis 9:1-3: <sup>1</sup>And God blessed Noah and his sons, and said to them, “Be fruitful and multiply, and fill the earth. <sup>2</sup>The fear of you and the dread of you shall be upon every beast of the earth, and upon every bird of the air, upon everything that creeps on the ground and all the fish of the sea; into your hand they are delivered. <sup>3</sup>Every moving thing that lives shall be food for you; and as I gave you the green plants, I give you everything.

Proverbs 12:10: A righteous man has regard for the life of his beast, but the mercy of the wicked is cruel.

Psalms 145:9: The LORD is good to all, and his compassion is over all that he has made.

Ecclesiastes 3:20-21: <sup>3</sup>All go to one place; all are from the dust, and all turn to dust again. <sup>4</sup>Who knows whether the spirit of man goes upward and the spirit of the beast goes down to the earth?

Matthew 6:26: Look at the birds of the air: they neither sow nor reap nor gather into barns, and yet your heavenly Father feeds them. Are you not of more value than they?

## Part 3

Psalms 24:1: The earth is the LORD’s and the fulness thereof, the world and those who dwell therein . . .

Genesis 2:15: The LORD God took the man and put him in the garden of Eden to till it and keep it.

1. Corinthians 6:19: Do you not know that your body is a temple of the Holy Spirit within you, which you have from God? You are not your own . . .

## Reading Materials

### Part 2

Exploring “Dominion”: Matthew Scully on Animals (interview with Ms. Lopez), December 3, 2002

Matthew Scully, a former editor at National Review, is a speechwriter for President George W. Bush.

He is the recently published author of *Dominion: The Power of Man, the Suffering of Animals, and the Call to Mercy*. The book has received rave reviews from the likes of the New York Times and mixed reaction from conservatives. It’s a fascinating – and disturbing – read, whether you come out agreeing with it or not.

**Kathryn Jean Lopez:** In a nutshell, how are we abusing dominion, our stewardship over animals?

**Matthew Scully:** In the same way that human beings are prone to abusing any other kind of power – by forgetting that we are not the final authority. The people who run our industrial live-



stock farms, for example, have lost all regard for animals as such, as beings with needs, natures, and a humble dignity of their own. They treat these creatures like machines and “production units” of man’s own making, instead of as living creatures made by God. And you will find a similar arrogance in every other kind of cruelty as well.

**Lopez:** When and why did you decide to become a vegetarian?

**Scully:** In the summer or fall of 1974, I read some books about factory farming, and decided that I wanted no part of it. The pictures alone were enough to convince me – chickens de-beaked and stuffed into cages so tiny they can’t even flap their wings, pigs locked in narrow iron crates they never leave, veal calves deliberately undernourished and chained or tethered inside of dark boxes. I saw in such pictures something merciless, deeply disordered, and unworthy of humanity. And I see factory farming just that way today.

Our family had a dog at the time, too – Lucky. He was a beautiful, noble creature, and taught me to love and respect animals. To my mind it seemed an obvious problem: I would never want Lucky to be treated that way. Why on earth should these other creatures – animals of comparable feeling and intelligence – be treated that way? A dog is not the moral equal of a human being. But a dog is very definitely the moral equal of a pig, and its only human caprice and economic convenience that say otherwise. I thought then and believe now that there is a fundamental inconsistency in granting kindness to one while averting my eyes from the suffering – the man-made miseries – of the other.

**Lopez:** You write at one point in *Dominion*: “this new science of genetic engineering carries the darkest implications of all for animals, conferring on us the power not only to use them as we will but to remake them as we will.” I confess, though, I am more concerned about the implications for human life. Am I wrong – as Christian and as a conservative?

**Scully:** No, I think that is the right Christian response. But of course to be “more concerned” about the abuses of science toward human life implies some level of concern for its abuses toward animal life. And so much that is done to animals today in the name of science goes entirely unexamined – putting the genes of a jellyfish into a primate to see if the latter will glow, as a lab in Oregon has done, or cloning animals for no better reason than more consistent meat quality. The most-appalling example I came across while writing *Dominion* is a project among agricultural scientists to genetically engineer pigs so they’re less “stressed” in factory-farm conditions and during the mayhem of industrial-scale slaughter. Basically the idea is to create fear-free pigs, to somehow expunge from the creatures’ genetic makeup their very desire to live. As I say in the book: Instead of redesigning the factory farm to suit the animal, they are redesigning the animal to suit the factory farm. All of this for no greater good than efficiency in production, lower costs, and lower prices. But there are moral costs here, too, and it’s one of those cases when we would do well to think hard about our own rights toward animals.

**Lopez:** You note in the book that you are not especially pious. Then why do you rely so much on religion?

**Scully:** I meant by this that I have never been a regular churchgoer or counted myself a member of any church. I did attend Catholic schools up to the ninth grade, and I admire much in the Catholic Church. Readers tell me that this influence comes through in *Dominion*, and if so I am glad of it. Nowhere in the book, however, do I presume to state the teachings of that church or

any other from the standpoint of an adherent. At the same time, if I read my Bible right, then there is Good News even for the lowly animals – that love and mercy have come into the world, and we can be its agents. And when I think of the suffering of the creatures in our factory farms, laboratories, puppy mills, or of any animal neglected or mistreated by man, for me there is no more powerful question than to ask: “What would the Good Shepherd think of this?”

**Lopez:** What, in your experience, do the “greens” make of you – a conservative, Republican-administration vet, sticking his neck out on animal rights?

**Scully:** Let me be the first on NRO [National Review Online] to break the story that there are actually other Republicans concerned about cruelty to animals. Outgoing Senator Bob Smith was a true champion of compassion for animals, but others remain such as Senator Wayne Allard and Representative Chris Smith. The same is true in the U.K., where many Tories have favored the abolition of veal farming, battery cages, fur farming, fox hunting, and hare coursing among other cruel practices and vicious recreations. As for environmentalists, I think they generally approve of the book, and I am glad that I’ve come to know some of them, including Robert F. Kennedy Jr. He is a brave foe of factory farmers, for both environmental and animal-welfare reasons. I count myself his ally, as do the thousands of farmers still worthy of that name.

**Lopez:** When people – conservatives – hear “animal rights” they often think of Peter Singer. Are you in part attempting to get the arguments away from the likes of Singer?

**Scully:** I start with a respect for anyone who gives serious attention to the matter, and to their credit animal rights groups are often the ones who bring the problems of cruelty to our attention. I think for example of one group that smuggled a camera into a packing plant a few years ago. Their footage showed awful things like cows being carved up alive and squealing pigs being dropped into scalding tanks, which happens every day. For their efforts, they get derided as meddlesome radicals, crackpots, or what have you. But I think such people show great courage, and do us a service.

It’s also worth recalling that people can agree on the same objectives for different reasons: A secular philosopher like Peter Singer can oppose factory farming because it’s unethical by his theories of justice. An environmentalist can oppose factory farming because it’s reckless stewardship. A conservative can oppose factory farming because it is destructive to small farmers and to the decent ethic of husbandry those farmers live by. A religious person can oppose factory farming because it is degrading to both man and animal – an offense to God. The point is to end the cruelty. And we shouldn’t let secondary differences interfere with primary obligations.

One problem with some animal-rights and “liberation” advocates is that their arguments fail to speak to the average person. They venture off into various theories which sound far removed from actual, everyday life, and so are easily dismissed as eccentric, irrelevant, or, worst of all, hostile to the religious and moral convictions most people still hold. This can have the perverse effect of providing others an excuse to ignore the wrongs done to animals. As a practical matter, the only legal right that any animal can enjoy is to be free from human cruelty or other wrongdoing, and we do not need a new theory for that. And so in my book I try to speak in the simplest terms of reasoned moral judgment, the language of duty, love, mercy, and compassion for the weak.

**Lopez:** Is hunting immoral?

**Scully:** One thing I noticed, reading articles and books by sport hunters, is that they themselves are often uneasy about the things they do. And I hope *Dominion* will encourage more of that self-examination among the relatively few people – about five percent of Americans – with a taste for bloodsport. Hunting, if it can be justified at all, falls into the category of the necessary evil. When the aim is just the pleasure of stalking and killing, or the pride of a “trophy,” the necessity is absent and you have to ask yourself what’s left.

In the book, however, I do not pass judgment on all hunting. I just try to fix a clear standard, to lay down the same kind of basic moral boundaries we need in livestock farming. Pick up any hunting magazine and you will find page after page of ads for fenced-in hunting ranches promising a “100 percent guaranteed kill.” Many hunters today use high-tech firearms and other gadgetry described in the book, or else bows that kill like a knife, maximizing their own pleasure at the cost of maximal suffering for the animal. They have professional guides whispering at their side. They shoot birds and other creatures – even aging animals sold by zoos – released from cages at their command. They routinely bait animals, as any game warden will attest. It gets even worse, as you will find in my chapter about a group of trophy hunters called Safari Club International. Hunting of the kind I describe there is dishonorable, occasionally depraved, and immoral by the standards of “fair chase” that hunters themselves profess on the rare occasions they are called to account. All such practices should be illegal as well – on the general principle that if a man’s going to hunt, let him at least hunt like a man.

**Lopez:** When it comes to animals, what’s your goal?

**Scully:** I hope that over time our laws will define clear and consistent obligations in the treatment of animals. For this we need only follow the logic of cruelty laws already in place – prohibiting not only individual acts of cruelty those statutes now cover, but also the merciless institutional cruelties the law ignores. In Florida last month, we saw how this can be done when 55 percent of voters approved a ballot initiative to prohibit the use of narrow gestation crates for sows. In Oklahoma, a sizable majority made that state the 48th to outlaw cockfighting. Laws like these can make a big difference, showing animal-related industries that there are limits, and ethical standards, and it’s not just anything goes.

**Lopez:** If there is one message you could get through to the traditional Left and the Right on these issues of animal rights what would it be? Would it be a different one for each?

**Scully:** Conservatives like to think of animal protection as a trendy leftist cause, which makes it easier to brush off. And I hope that more of us will open our hearts to animals. I also believe that in factory farming and other cruelties conservatives will find some familiar problems – moral relativism, self-centered materialism, license passing itself off as freedom, and the culture of death. Among liberals, I don’t really detect a great deal more sympathy for animals than on the Right. *The Nation* and *Mother Jones*, for instance, are as unlikely to give the subject serious attention as, well, a certain conservative journal which shall go unnamed. For those on the Left who do identify with animal causes, however, my message is that no creature on earth is more innocent, or defenseless, or in need of compassion than a child waiting to be born.

## Readings for Part 3

### 1) Will We Still Eat Meat?

Maybe not, if we wake up to what the mass production of animal flesh is doing to our health – and the planet's, by Ed Ayers, © Time Magazine 11/8/99

When Julius Caesar made his triumphal entrance into Rome in 45 B.C., he celebrated by giving a feast at which thousands of guests gorged on poultry, seafood and game. Similar celebrations featuring exorbitant consumption of animal flesh have marked human victories – in war, sport, politics and commerce – since our species learned to control fire. Throughout the developing world today, one of the first things people do as they climb out of poverty is to shift from their peasant diet of mainly grains and beans to one that is rich in pork or beef. Since 1950, per capita consumption of meat around the globe has more than doubled.

Meat, it seems, is not just food but reward as well. But in the coming century, that will change. Much as we have awakened to the full economic and social costs of cigarettes, we will find we can no longer subsidize or ignore the costs of mass-producing cattle, poultry, pigs, sheep and fish to feed our growing population. These costs include hugely inefficient use of freshwater and land, heavy pollution from livestock feces, rising rates of heart disease and other degenerative illnesses, and spreading destruction of the forests on which much of our planet's life depends.

First, consider the impact on supplies of freshwater. To produce 1 lb. of feedlot beef requires 7 lbs. of feed grain, which takes 7,000 lbs. of water to grow. Pass up one hamburger, and you'll save as much water as you save by taking 40 showers with a low-flow nozzle. Yet in the U.S., 70% of all the wheat, corn and other grain produced goes to feeding herds of livestock. Around the world, as more water is diverted to raising pigs and chickens instead of producing crops for direct consumption, millions of wells are going dry. India, China, North Africa and the U.S. are all running freshwater deficits, pumping more from their aquifers than rain can replenish. As populations in water-scarce regions continue to expand, governments will inevitably act to cut these deficits by shifting water to grow food, not feed. The new policies will raise the price of meat to levels unaffordable for any but the rich.

That prospect will doubtless provoke protests that direct consumption of grain can't provide the same protein that meat provides. Indeed, it can't. But nutritionists will attest that most people in the richest countries don't need nearly as much protein as we're currently getting from meat, and there are plenty of vegetable sources – including the grains now squandered on feed – that can provide the protein we need.

Unfortunately, this isn't just a matter of productive capacity. Mass production of meat has also become a staggering source of pollution. Maybe cow pies were once just a pastoral joke, but in recent years livestock waste has been implicated in massive fish kills and outbreaks of such diseases as *psittacosis*, which causes memory loss, confusion and acute skin burning in people exposed to contaminated water. In the U.S., livestock now produce 130 times as much waste as people do. Just one hog farm in Utah, for example, produces more sewage than the city of Los Angeles. These megafarms are proliferating, and in populous areas their waste is tainting drinking water. In more pristine regions, from Indonesia to the Amazon, tropical rain forest is being burned down to make room for more and more cattle. Agriculture is the world's biggest cause of deforestation, and increasing demand for meat is the biggest force in the expansion of agriculture.

What has proved an unsustainable burden to the life of the planet is also proving unsustainable for the planet's dominant species. In China a recent shift to meat-heavy diets has been linked to increases in obesity, cardiovascular disease, breast cancer and colorectal cancer. U.S. and World Health Organization researchers have announced similar findings for other parts of the world. And then there are the growing concerns about what happens to people who eat the flesh of animals that have been pumped full of genetically modified organisms, hormones and antibiotics.

These concerns may seem counterintuitive. We evolved as hunter-gatherers and ate meat for a hundred millennia before modern times. It's natural for us to eat meat, one might say. But today's factory-raised, transgenic, chemical-laden livestock are a far cry from the wild animals our ancestors hunted. When we cleverly shifted from wildland hunting and gathering to systematic herding and farming, we changed the natural balances irrevocably. The shift enabled us to produce food surpluses, but the surpluses also allowed us to reproduce prodigiously. When we did, it became only a matter of time before we could no longer have the large area of wildland, per individual, that is necessary to sustain a top-predator species.

By covering more and more of the planet with our cities, farms and waste, we have jeopardized other top predators that need space as well. Tigers and panthers are being squeezed out and may not last the coming century. We, at least, have the flexibility—the omnivorous stomach and creative brain—to adapt. We can do it by moving down the food chain: eating foods that use less water and land, and that pollute far less, than cows and pigs do. In the long run, we can lose our memory of eating animals, and we will discover the intrinsic satisfactions of a diverse plant-based diet, as millions of people already have.

I'm not predicting the end of all meat eating. Decades from now, cattle will still be raised, perhaps in patches of natural rangeland, for people inclined to eat and able to afford a porterhouse, while others will make exceptions in ceremonial meals on special days like Thanksgiving, which link us ritually to our evolutionary and cultural past. But the era of mass-produced animal flesh, and its unsustainable costs to human and environmental health, should be over before the next century is out.

Ed Ayres is editorial director of the Worldwatch Institute and author of *God's Last Offer: Negotiating for a Sustainable Future*.

2) The following excerpt is from the Preamble of the Statement of the Evangelical Climate Initiative "Climate Change: An Evangelical Call to Action". It was signed by 97 Evangelical leaders.

Over the last several years many of us have engaged in study, reflection, and prayer related to the issue of climate change (often called "global warming"). For most of us, until recently this has not been treated as a pressing issue or major priority. Indeed, many of us have required considerable convincing before becoming persuaded that climate change is a real problem and that it ought to matter to us as Christians. But now we have seen and heard enough to offer the following moral argument related to the matter of human-induced climate change. We commend the four simple but urgent claims offered in this document to all who will listen, beginning with

our brothers and sisters in the Christian community, and urge all to take the appropriate actions that follow from them.

[The Four Claims are:]

- 1: Human-Induced Climate Change Is Real
2. The Consequences of Climate Change Will Be Significant, and Will Hit the Poor the Hardest
3. Christian Moral Convictions Demand Our Response to the Climate Change Problem
4. The need to act now is urgent. Governments, businesses, churches, and individuals all have a role to play in addressing climate change – starting now.

[To see the entire statement, go to <http://www.christiansandclimate.org/statement.>]

United Nations Food and Agriculture Organization press release

Livestock a major threat to environment  
Remedies urgently needed

Rome, 11/29/06 – Which causes more greenhouse gas emissions, rearing cattle or driving cars?  
Surprise!

According to a new report published by the United Nations Food and Agriculture Organization, the livestock sector generates more greenhouse gas emissions as measured in CO<sub>2</sub> equivalent – 18 percent – than transport. It is also a major source of land and water degradation.

Says Henning Steinfeld, Chief of FAO's Livestock Information and Policy Branch and senior author of the report: "Livestock are one of the most significant contributors to today's most serious environmental problems. Urgent action is required to remedy the situation."

With increased prosperity, people are consuming more meat and dairy products every year. Global meat production is projected to more than double from 229 million tonnes [1 metric ton = 2205 lb] in 1999/2001 to 465 million tonnes in 2050, while milk output is set to climb from 580 to 1043 million tonnes.

### **Long shadow**

The global livestock sector is growing faster than any other agricultural sub-sector. It provides livelihoods to about 1.3 billion people and contributes about 40 percent to global agricultural output. For many poor farmers in developing countries livestock are also a source of renewable energy for draft and an essential source of organic fertilizer for their crops.

But such rapid growth exacts a steep environmental price, according to the FAO report, *Livestock's Long Shadow – Environmental Issues and Options*. "The environmental costs per unit of livestock production must be cut by one half, just to avoid the level of damage worsening beyond its present level," it warns.

When emissions from land use and land use change are included, the livestock sector accounts for 9 percent of CO<sub>2</sub> deriving from human-related activities, but produces a much larger share of even more harmful greenhouse gases. It generates 65 percent of human-related nitrous oxide,

which has 296 times the Global Warming Potential (GWP) of CO<sub>2</sub>. Most of this comes from manure.

And it accounts for respectively 37 percent of all human-induced methane (23 times as warming as CO<sub>2</sub>), which is largely produced by the digestive system of ruminants, and 64 percent of ammonia, which contributes significantly to acid rain.

Livestock now use 30 percent of the earth's entire land surface, mostly permanent pasture but also including 33 percent of the global arable land used to producing feed for livestock, the report notes. As forests are cleared to create new pastures, it is a major driver of deforestation, especially in Latin America where, for example, some 70 percent of former forests in the Amazon have been turned over to grazing.

### **Land and water**

At the same time herds cause wide-scale land degradation, with about 20 percent of pastures considered as degraded through overgrazing, compaction and erosion. This figure is even higher in the drylands where inappropriate policies and inadequate livestock management contribute to advancing desertification.

The livestock business is among the most damaging sectors to the earth's increasingly scarce water resources, contributing among other things to water pollution, eutrophication and the degeneration of coral reefs. The major polluting agents are animal wastes, antibiotics and hormones, chemicals from tanneries, fertilizers and the pesticides used to spray feed crops. Widespread overgrazing disturbs water cycles, reducing replenishment of above and below ground water resources. Significant amounts of water are withdrawn for the production of feed.

Livestock are estimated to be the main inland source of phosphorous and nitrogen contamination of the South China Sea, contributing to biodiversity loss in marine ecosystems.

Meat and dairy animals now account for about 20 percent of all terrestrial animal biomass. Livestock's presence in vast tracts of land and its demand for feed crops also contribute to biodiversity loss; 15 out of 24 important ecosystem services are assessed as in decline, with livestock identified as a culprit.

To read more, including suggested remedies and a link to the full report, go to <http://www.fao.org/newsroom/en/news/2006/1000448/>.

### 3) Heart Disease Prevention

American Heart Association conclusions:

Risk factors that we can modify, treat, or control:

Tobacco smoke

High blood cholesterol

High blood pressure

Physical inactivity

Obesity and overweight

Diabetes mellitus

See <http://www.americanheart.org/presenter.jhtml?identifier=4734>

### 4) Cancer Prevention

American Cancer Society recommendations include:

Avoid tobacco  
Protect against sunlight  
Maintain a healthy weight  
Stay physically active  
Eat right, including 5 servings of fruits and vegetables per day

See “The complete Guide – Nutrition and Physical Activity”  
[http://www.cancer.org/docroot/PED/content/PED\\_3\\_2X\\_Diet\\_and\\_Activity\\_Factors\\_That\\_Affect\\_Risks.asp?sitearea=PED](http://www.cancer.org/docroot/PED/content/PED_3_2X_Diet_and_Activity_Factors_That_Affect_Risks.asp?sitearea=PED)

## 5) Position Statement of the American Dietetic Association and Dietitians of Canada: Vegetarian Diets

### Abstract

It is the position of the American Dietetic Association and Dietitians of Canada that appropriately planned vegetarian diets are healthful, nutritionally adequate, and provide health benefits in the prevention and treatment of certain diseases. Approximately 2.5% of adults in the United States and 4% of adults in Canada follow vegetarian diets. A vegetarian diet is defined as one that does not include meat, fish, or fowl. Interest in vegetarianism appears to be increasing, with many restaurants and college foodservices offering vegetarian meals routinely. Substantial growth in sales of foods attractive to vegetarians has occurred, and these foods appear in many supermarkets. This position paper reviews the current scientific data related to key nutrients for vegetarians, including protein, iron, zinc, calcium, vitamin D, riboflavin, vitamin B-12, vitamin A, n-3 fatty acids, and iodine. A vegetarian, including vegan, diet can meet current recommendations for all these nutrients. In some cases, use of fortified foods or supplements can be helpful in meeting recommendations for individual nutrients. Well-planned vegan and other types of vegetarian diets are appropriate for all stages of the life cycle, including during pregnancy, lactation, infancy, childhood, and adolescence. Vegetarian diets offer a number of nutritional benefits, including lower levels of saturated fat, cholesterol, and animal protein as well as higher levels of carbohydrates, fiber, magnesium, potassium, folate, and antioxidants such as vitamins C and E and phytochemicals. Vegetarians have been reported to have lower body mass indices than nonvegetarians, as well as lower rates of death from ischemic heart disease; vegetarians also show lower blood cholesterol levels; lower blood pressure; and lower rates of hypertension, type 2 diabetes, and prostate and colon cancer.

Journal of the American Dietetic Association 2003;103:748-765.  
<http://www.eatright.org/ada/files/veg.pdf>