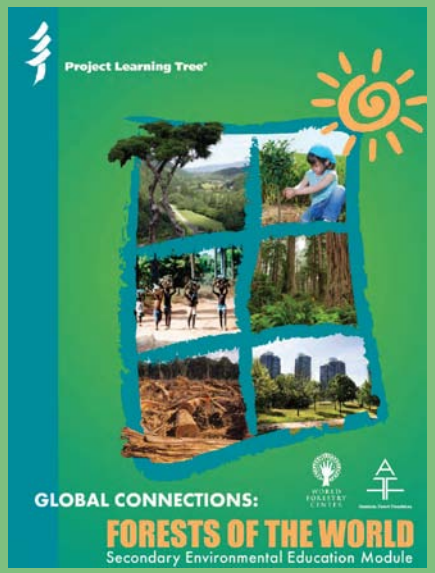
Project Learning Tree®

GLOBAL CONNECTIONS:
FORESTS OF THE WORLD
Secondary Environmental Education Module

Hike Through The Guide
Global Connections: Forests of the World



American Forest Foundation

WORLD FORESTRY CENTER

Organization of the book

1. Table of Contents (pgs 3-4)
2. Introduction to PLT and WFC (pgs 7-10)
3. *Why Study Forest of the World?* (pgs11-13)
4. Icebreaker: *World Forest Tour* (pgs 23-30)
5. Activities (pgs 31-112)
6. Students Pages / Worksheets (throughout the Guide)
7. Appendices A-L (pgs 113-152)

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Why study forest of the world?

After completing the activities in this module, students should be able to do the following:

- Demonstrate an understanding of how different cultures, people, and societies view and define forests.
- Describe different ways that people around the world interact with forests.
- Identify geographic factors that determine the major types of forests around the world.
- Explain how environmental and human factors have affected and continue to affect the world's forests.
- Describe how economic, political, and social sys-tems play a role in managing forests around the world for a variety of uses.
- Define sustainability as it relates to the world's forests, including ecological, economic, and social elements of sustainability.
- Explore efforts around the world to protect and conserve forests and forest resources.

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Subjects and disciplines supported by the activities

- AP Biology
- AP Environmental Science
- AP Human Geography
- Biology
- Career and Technical programs
- Computers and Technology
- Economics
- Environmental Science
- Foreign Languages
- Geography
- Global Studies
- International Baccalaureate Program
- International Studies
- Language Arts
- Science
- Social Studies
- Vocational Agriculture

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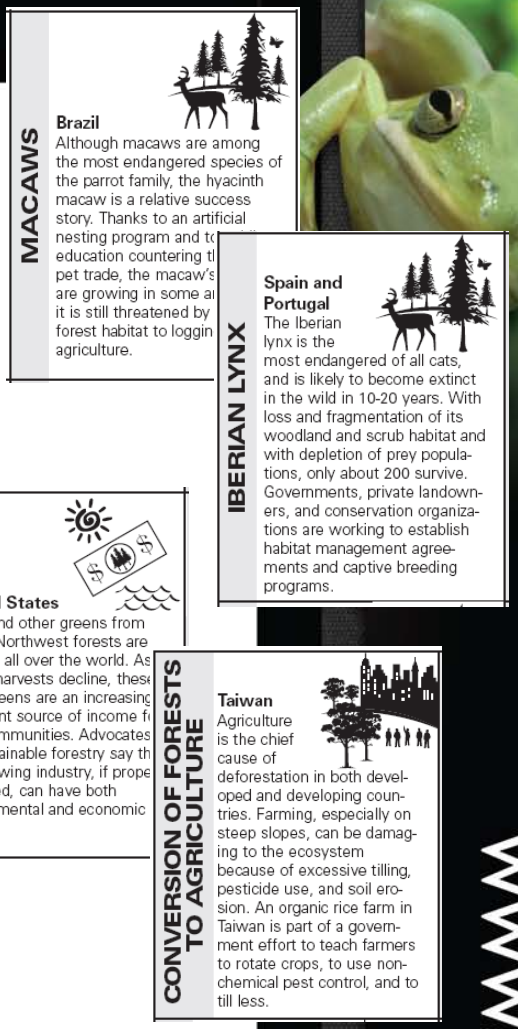
World Forest Tour

- 4 cards about world's forests.
- Pages 23-30
- To stimulate student participation, use as ice breakers, ideas for research or investigation.
- Print, laminate, and cut the cards. To create a display or grab bag of topics and countries for student to choose.
- Have students select, compare and discuss cards in using a variety of different groupings. What do cards have in common? How are they related?



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How to use the module?

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Activity Design: Side Bars

Subjects

Searchable Keywords: for online research

PLT Conceptual Framework Appendix B, p/116

Skills

Supplies

Prep Time and do the activity

Activity Title

Overview

Objectives

Assessment

Making the Global Connection

1

Students will create and conduct a survey to help them determine how they and others view themselves as linked to forests around the world.

Subjects
Environmental Sciences, Ecology, Geography, International Studies, Language Arts, Social Studies, Visual Arts

Searchable Key Words
Ecosystem services, forest commodity, forest product, world's forests

Concepts
2.8 Human societies and cultures throughout the world interact with each other and affect the natural systems on which they depend.

Skills
Identifying Main Ideas, Interpreting, Observing, Organizing Information, Researching, Synthesizing

Materials
"Global Connections: Forests of the World" poster, copies of the student page (optional)

Time Considerations
Preparation: 20 minutes
Activity: One to two 50-minute periods, plus time for conducting the survey

Related Activities in Other PLT Guides
Personal Places (*Places We Live* module); Adopt-a-Forest (*The Changing Forest: Forest Ecology* module); What's a Forest to You? (*Exploring Environmental Issues: Focus on Forests* module)

Objectives
- Students will identify ways that forests are important to people and other living things.
- Students will develop and conduct a survey of family and friends to learn what others think about their connection to the world's forests.

Assessment
- Have students write a few paragraphs about what they learned from developing the survey and from evaluating the survey results.

Background

People who live in towns and cities can easily forget how profoundly the well-being of humans is linked to forests. Yet, the world's forests are vitally important to everyone.

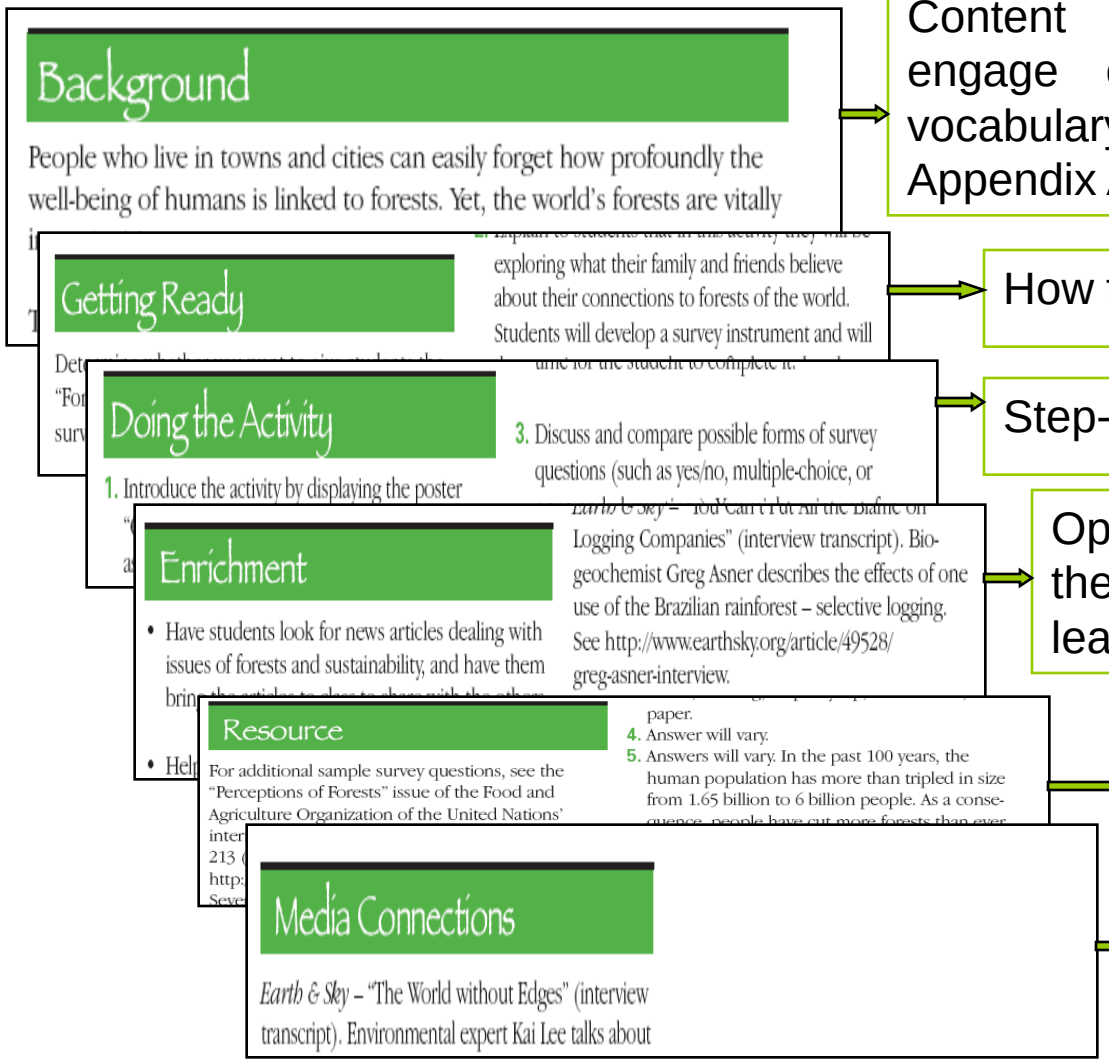
Today, forests cover about 30 percent of the world's land area.[1] Forests are key to the biological functioning of Earth. They play a major role in the cycling of carbon, nitrogen, and oxygen. They help to regulate temperature and rainfall. They help to stabilize soils, to protect ***watersheds***, and to provide essential ***habitat*** for animals and plants. They store more genes than any other ***ecosystem.***[2] (See the box titled "What Forests Provide.")

Forests also provide wood and fiber. Nearly half the people on Earth use wood as fuel for cooking and heating, and a majority of the wood consumed worldwide is burned for fuel. Wood is also used for building materials, furniture, tools, paper, packaging, and many other purposes. It plays a part in more activities in the economy than any other ***commodity.*** Almost every major industry relies on wood for at least one of its processes.[3]

In addition to wood, many other goods that humans use daily come from

Related PLT activities in other modules

Activity Design: Teacher Friendly



Content information to understand and engage others in the activity. Italicized vocabulary, words are found in the Glossary, Appendix A, p/113

How to prepare to lead the activity

Step-by-step explanation of activities

Opportunities to broaden the scope of the activity enhancing students learning

Published materials to support your class

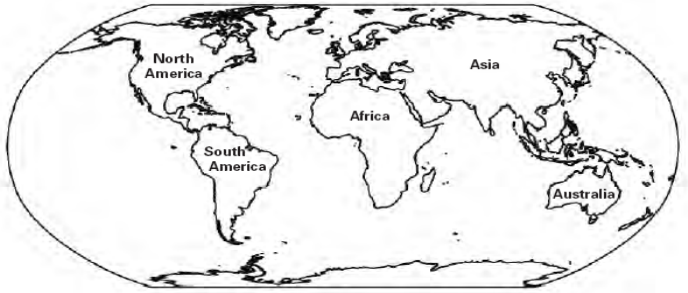
Audio, Visual Resources

Students Pages Can be duplicated and shared as guide to students investigation and discussion

Available electronically – pdf www.plt.org/….

STUDENT PAGE

Extreme Journeys



Your group will take one of the following journeys to explore different parts of the world.

Journeys

1. Start at the southern trip of Africa, and follow the longitude line north all the way to the North Pole.
2. Start where you live, and follow the nearest latitude line going east all the way around the world back to where you live.
3. Start at the southern tip of South America, and devise a journey through both Americas that takes you to each of the 20 ecological zones.

For your journey roughly sketch your route on the world map above. Also, record on the back of this page the domains and ecological zones you travel through (in order) as in the sample chart, noting changes in temperature and moisture as you move from zone to zone.

Sample Chart

Geographical Area	Domain	Ecological Zone	Is the Temperature > or < or = to Previous Zone?	Is the Moisture Level > or < or = to Previous Zone?	Is This a High Altitude Zone?
Central Africa	Tropical	Tropical rain forest			No
North Central Africa	Tropical	Tropical moist deciduous forest	=	<	No
North Central Africa	Subtropical	Subtropical humid forest	<	=	No
...and so on					

Student Activities in the Guide

1. Making the Global Connection
2. What Is a Forest?
3. Mapping the World's Forests
4. Analyzing Patterns of Forest Change
5. Understanding the Effects of Forest Uses
6. Seeking Sustainability: A Global Response
7. Exploring the World Marketplace
8. Making Consumer Choices
9. Researching Forests Around the World

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Activity 1
Making the Global Connection

Students will…

…conduct a survey to help them assess what they and others know about forests and to consider ways that people are linked to forests around the world.

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Activity 2
What Is a Forest?

Students will…

…analyze various definitions of the term forest and then consider different cultural perspectives that affect people's perception of forests.

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Activity 3
Mapping the World's Forests

Students will…

…examine the system of global ecological zones to see how temperature and moisture determine the type of forest in a given locale.

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Activity 4
Analyzing Patterns of Forest Change

Students will…

…identify global trends in forest cover, analyzing, through maps and historical accounts, how particular forests have changed over time.

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Activity 5
Understanding the Effects of Forest Uses

Students will…

…analyze the effects of different ways that people use the world's forests and determine which effects may be sustainable according to one definition.

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Activity 6
Seeking Sustainability: A Global Response

Students will…

…consider possible indicators to find out what is being done locally and in other countries to determine whether forests are managed in a sustainable way, and learn about one international initiative for monitoring forest sustainability.

Activity 7
Exploring the World Marketplace

Students will…

…conduct a simulation in which countries use their forest resources to "manufacture" products and to sell them to an international trader. Through the simulation, students will experience what can happen when forest resources are uneven-ly distributed around the world and will explore some of the tradeoffs of resource use.

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Activity 8
Making Consumer Choices

Students will…

...using paper as an example, students will analyze the life cycle and consumption patterns of forest products, and they will identify the international dimensions of product use, drawing conclusions about consuming forest products in a way that is more intelligent and takes into account the global consequences.

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Activity 9
Researching Forests Around the World

Students will…

…explore their connections to the world's forests by researching a forest in another country or region, and by creating a profile about that forest.

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Appendices

A. Glossary
B. PLT Conceptual Framework
C. References Cited
D. Countries Cited in Module
E. Forest Area and Area Change, by Country
F. Production, Trade, and Consumption of Forest Products
G. Resources
H. Correlation to National Science Education Standards
I. Correlation to Curriculum Standards for Social Studies
J. Suggestions for Using the Internet as a Resource
K. What Makes Up an Environmental Issue?
L. Metric Conversion Chart

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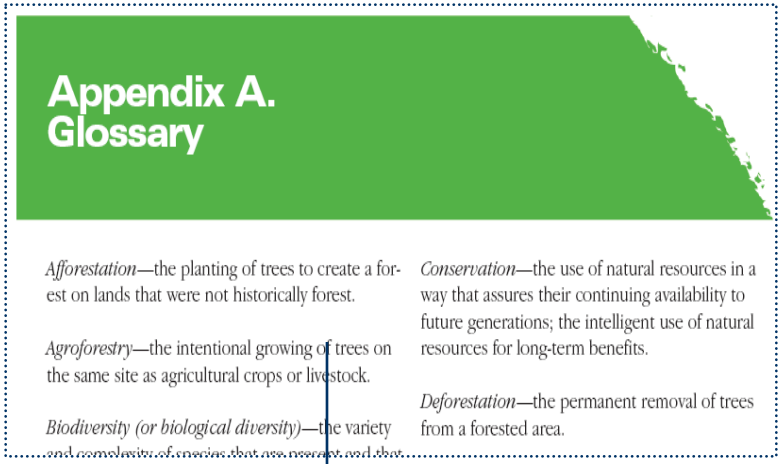
Appendix A:
Glossary page 113



Appendix A. Glossary

Afforestation—the planting of trees to create a forest on lands that were not historically forest.

Agroforestry—the intentional growing of trees on the same site as agricultural crops or livestock.

Biodiversity (or biological diversity)—the variety and complexity of species that are present and their

Conservation—the use of natural resources in a way that assures their continuing availability to future generations; the intelligent use of natural resources for long-term benefits.

Deforestation—the permanent removal of trees from a forested area.

All bold/italicized words from the activities are explained here

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Appendix B:
PLT Conceptual Framework page 116

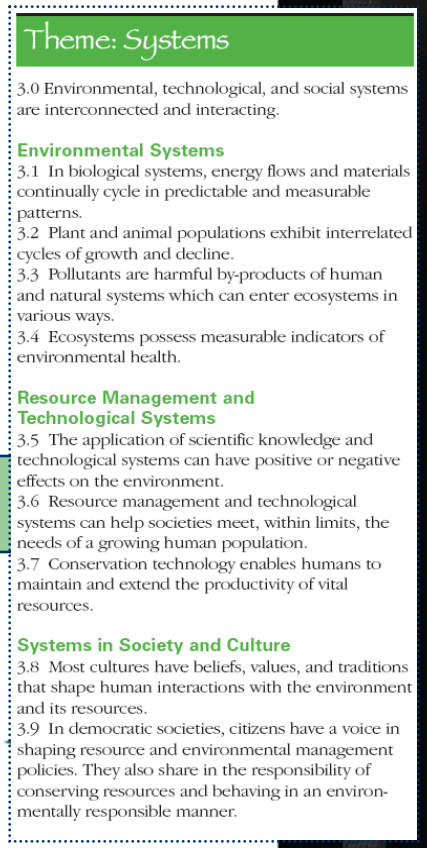
5 Major Themes

1. Diversity
2. Interrelationships
3. Systems
4. Structure and Scale
5. Patterns of Change

Each theme covers 3 topics

1. Environment
2. Resource Management & Technology
3. Society & Culture

Sample:



Theme: Systems

3.0 Environmental, technological, and social systems are interconnected and interacting.

Environmental Systems

3.1 In biological systems, energy flows and materials continually cycle in predictable and measurable patterns.
3.2 Plant and animal populations exhibit interrelated cycles of growth and decline.
3.3 Pollutants are harmful by-products of human and natural systems which can enter ecosystems in various ways.
3.4 Ecosystems possess measurable indicators of environmental health.

Resource Management and Technological Systems

3.5 The application of scientific knowledge and technological systems can have positive or negative effects on the environment.
3.6 Resource management and technological systems can help societies meet, within limits, the needs of a growing human population.
3.7 Conservation technology enables humans to maintain and extend the productivity of vital resources.

Systems in Society and Culture

3.8 Most cultures have beliefs, values, and traditions that shape human interactions with the environment and its resources.
3.9 In democratic societies, citizens have a voice in shaping resource and environmental management policies. They also share in the responsibility of conserving resources and behaving in an environmentally responsible manner.

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Appendix C:
References Cited page 119

Alphabetical Bibliography of references used to develop the activities

Appendix C.
References Cited

American Forest and Paper Association, "Recycling." 2005. http://www.afandpa.org/Content/NavigationMenu/Environment_and_Recycling/Recycling/Recycling.htm (accessed January 25, 2008).

Ausubel, Jesse H., David G. Victor, and Iddo K. Wernick. "The Environment since 1970." *Consequences: The Nature and Implications of Environmental Change* 1, no. 3 (May 15, 1995): 2–15. http://phe.rockefeller.edu/env70 (accessed January 25, 2008).

Ball, Lynn, et al. Forestry Department. *The Global Forest Resources Assessment 2005*. Rome: FAO.

Cho, Yumi. "Effects of Indonesia Forest Fire." *TED Case Studies: An Online Journal* 5, no. 2 (June 1998). American University's Trade and Environment Database. http://www.american.edu/projects/mandala/TED/indofire.htm (accessed January 25, 2008).

Dunn, Ross E. "Growing Good Citizens with a World-Centered Curriculum." *Educational Leadership* 60, no. 2 (October 2002): 10–13.

Falconer, Julia. "The Cultural and Symbolic Importance of Forest Resources." *The Major Significance of "Minor" Forest Products: The Local Use and Value of Forests in the West African*

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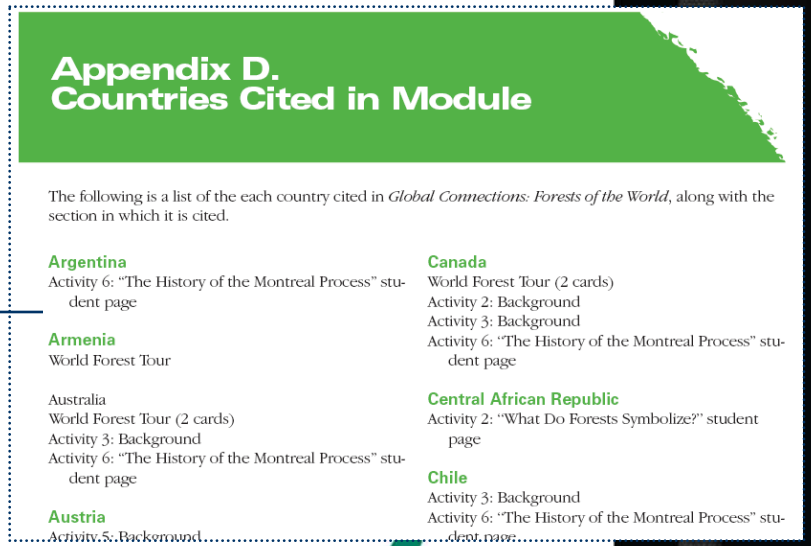
Appendix D:
Countries Cited in Module page 123

Alphabetical list of each country included in the guide and the section in which it is used



Appendix D.
Countries Cited in Module

The following is a list of the each country cited in *Global Connections: Forests of the World*, along with the section in which it is cited.

Argentina
Activity 6: "The History of the Montreal Process" student page

Armenia
World Forest Tour

Australia
World Forest Tour (2 cards)
Activity 3: Background
Activity 6: "The History of the Montreal Process" student page

Austria
Activity 5: Background

Canada
World Forest Tour (2 cards)
Activity 2: Background
Activity 3: Background
Activity 6: "The History of the Montreal Process" student page

Central African Republic
Activity 2: "What Do Forests Symbolize?" student page

Chile
Activity 3: Background
Activity 6: "The History of the Montreal Process" student page

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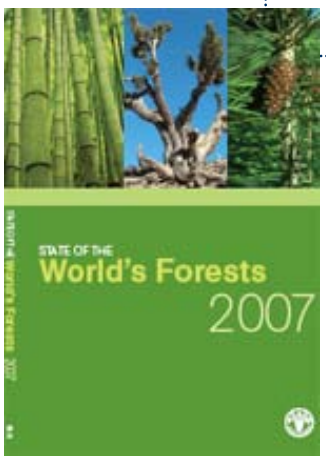
Appendix E: Forest Area and Area Change, by Country page 126

Data from the 2007 Food and Agriculture Organization (FAO) State of the World's Forest Report

Appendix E.
Forest Area and Area Change, by Country

Country/area	Forest area, 2005				Annual change rate			
	Total forest*	% of land area	Area per capita	Forest plantations	1990–2000		2000–2005	
	(1 000 ha)	(%)	(ha)	(1 000 ha)	(1 000 ha)	(%)	(1 000 ha)	(%)
Burundi	152	5.9	0.0	86	-9	-3.7	-8	-5.2
Cameroon	21 245	45.6	1.3	-	-220	-0.9	-220	-1
Central African Republic	22 755	36.5	5.8	1	-30	-0.1	-30	-0.1
Chad	11 921	9.5	1.4	15	-79	-0.6	-79	-0.7
Congo	22 471	65.8	5.8	51	-17	-0.1	-17	-0.1
Democratic Republic of the Congo	133 810	58.9	2.4	-	-532	-0.4	-319	-0.2
Equatorial Guinea	1 632	58.2	3.2	-	-15	-0.8	-15	-0.9
Gabon	21 775	84.5	15.8	36	-10	n.s.	-10	n.s.
Rwanda	480	19.5	0.1	413	3	0.8	27	6.9
Saint Helena	2	6.5	0.3	-	0	0	0	0
Sao Tome and Principe	27	28.4	0.2	-	0	0	0	0
Total Central Africa	**236 070**	**44.6**	**2.2**		**-810**	**-0.37**	**-673**	**-0.28**
British Indian Ocean Territory	3	32.5	3.0	-	0	0	0	0
Comoros	5	2.9	0.0	1	n.s.	-1	-1	-7.4



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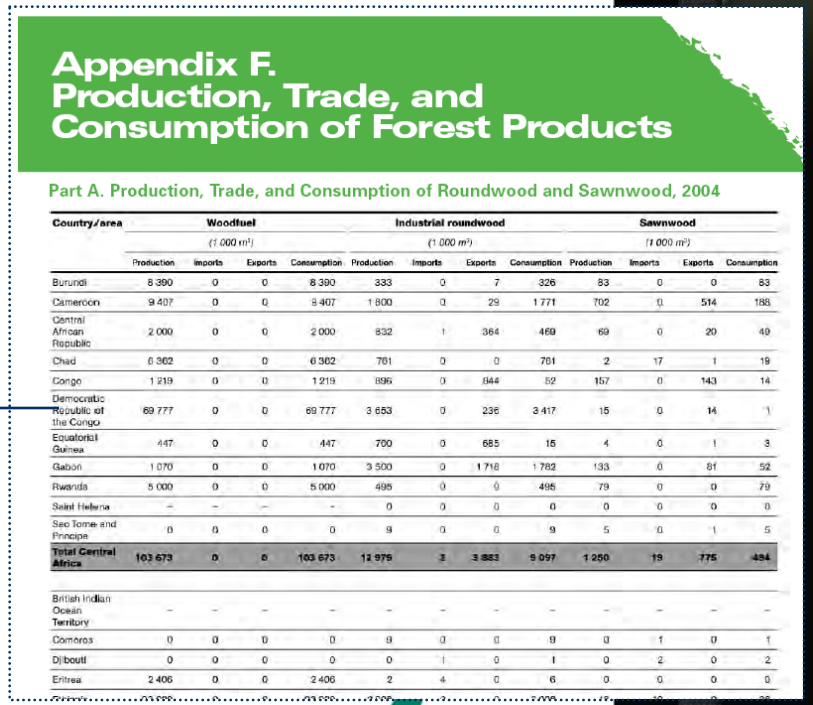
Appendix F: Production, Trade, and Consumption of Forest Products page133

Data from the 2007 Food and Agriculture Organization (FAO) State of the World's Forest Report



Appendix F. Production, Trade, and Consumption of Forest Products

Part A. Production, Trade, and Consumption of Roundwood and Sawnwood, 2004

Country/area	Woodfuel (1 000 m³)				Industrial roundwood (1 000 m³)				Sawnwood (1 000 m³)			
	Production	Imports	Exports	Consumption	Production	Imports	Exports	Consumption	Production	Imports	Exports	Consumption
Burundi	8 390	0	0	8 390	333	0	7	326	83	0	0	83
Cameroon	9 407	0	0	9 407	1 800	0	29	1 771	702	0	514	188
Central African Republic	2 000	0	0	2 000	832	1	364	469	69	0	20	49
Chad	6 362	0	0	6 362	761	0	0	761	2	17	1	19
Congo	1 219	0	0	1 219	896	0	844	52	157	0	143	14
Democratic Republic of the Congo	69 777	0	0	69 777	3 653	0	236	3 417	15	0	14	1
Equatorial Guinea	447	0	0	447	790	0	685	15	4	0	1	3
Gabon	1 070	0	0	1 070	3 500	0	1 718	1 782	133	0	81	52
Rwanda	5 000	0	0	5 000	495	0	0	495	79	0	0	79
Saint Helena	–	–	–	–	0	0	0	0	0	0	0	0
Sao Tome and Principe	0	0	0	0	9	0	0	9	5	0	1	5
Total Central Africa	**103 673**	**0**	**0**	**103 673**	**12 979**	**1**	**3 883**	**9 097**	**1 250**	**19**	**775**	**494**
British Indian Ocean Territory	–	–	–	–	–	–	–	–	–	–	–	–
Comoros	0	0	0	0	9	0	0	9	0	1	0	1
Djibouti	0	0	0	0	0	1	0	1	0	2	0	2
Eritrea	2 406	0	0	2 406	2	4	0	6	0	0	0	0

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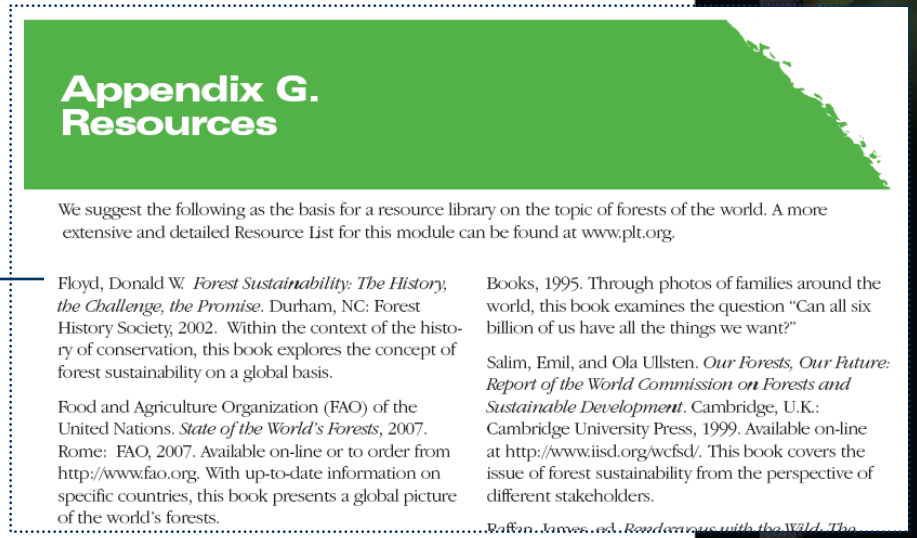
Appendix G: Resources page 147

- Suggested information sources for further studies
- Additional materials can be found at www.plt.org



Appendix G. Resources

We suggest the following as the basis for a resource library on the topic of forests of the world. A more extensive and detailed Resource List for this module can be found at www.plt.org.

Floyd, Donald W. *Forest Sustainability: The History, the Challenge, the Promise*. Durham, NC: Forest History Society, 2002. Within the context of the history of conservation, this book explores the concept of forest sustainability on a global basis.

Food and Agriculture Organization (FAO) of the United Nations. *State of the World's Forests*, 2007. Rome: FAO, 2007. Available on-line or to order from http://www.fao.org. With up-to-date information on specific countries, this book presents a global picture of the world's forests.

Books, 1995. Through photos of families around the world, this book examines the question "Can all six billion of us have all the things we want?"

Salim, Emil, and Ola Ullsten. *Our Forests, Our Future: Report of the World Commission on Forests and Sustainable Development*. Cambridge, U.K.: Cambridge University Press, 1999. Available on-line at http://www.iisd.org/wcfsd/. This book covers the issue of forest sustainability from the perspective of different stakeholders.

Rafan Jones, ed. *Rendezvous with the Wild: The*

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Appendix H: Correlation to National Science Education Standards page 148

Appendix H. Correlation to National Science Education Standards

Grades 9-12
National Academy of Sciences

Standard	Activity 1 Making the Global Connection	Activity 2 What's a Forest?	Activity 3 Mapping the World's Forests	Activity 4 Analyzing Patterns of Forest Change	Activity 5 Underst-anding the Effects of Forest Uses	Activity 6 Seeking Sustaina-bility: A Global Response	Activity 7 Exploring the World Market-place	Activity 8 Making Consumer Choices	Activity 9 Research-ing Forests around the World
A. Science as Inquiry	x		x	x		x		x	x
B. Physical Science									
C. Life Science	x	x	x	x	x	x			
D. Earth and Space Science			x	x		x			
E. Science and Tech-nology		x (Enrichment)	x	x (Enrichment)		x	x (Enrichment)	x (Enrichment)	x (Enrichment)
F. Science in Personal and Social Perspec-tives	x	x	x	x	x	x	x	x	x
G. History and Nature of Science		x	x			x			

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Grades 9-12
National Academy of Sciences

Standard	Activity 1 Making the Global Connection	Activity 2 What's a Forest?	Activity 3 Mapping the World's Forests	Activity 4 Analyzing Patterns of Forest Change	Activity 5 Understanding the Effects of Forest Uses	Activity 6 Seeking Sustainability: A Global Response	Activity 7 Exploring the World Marketplace	Activity 8 Making Consumer Choices	Activity 9 Researching Forests around the World
A. Science as Inquiry	X		X	X		X		X	X
B. Physical Science									
C. Life Science	X	X	X	X	X	X			
D. Earth and Space Science			X	X		X			
E. Science and Technology		X (Enrichment)	X	X (Enrichment)		X	X (Enrichment)	X (Enrichment)	X (Enrichment)
F. Science in Personal and Social Perspectives	X	X	X	X	X	X	X	X	X
G. History and Nature of Science		X	X			X			

Appendix I: Correlation to Nation Curriculum Standards for Social Studies page 149

Appendix I. Correlation to Curriculum Standards for Social Studies

High School
National Council for the Social Studies

Standard	Activity 1 Making the Global Connection	Activity 2 What's a Forest?	Activity 3 Mapping the World's Forests	Activity 4 Analyzing Patterns of Forest Change	Activity 5 Understanding the Effects of Forest Uses	Activity 6 Seeking Sustainability: A Global Response	Activity 7 Exploring the World Marketplace	Activity 8 Making Consumer Choices	Activity 9 Researching Forests around the World
I. Culture	a	a, c, d, g		a	a, c	a	a	a	a, c
II. Time, Continuity, and Change				b	b	b		b	c
III. People, Places, and Environments		b, c, d, e, f, g, h, k	a, b, c, e, f	b, c, e, f, h, i, j	f, h	h, k	e, h, j	k	a, e, f, h, i
IV. Individual Development and Identity	a, b	a, f			e	e	e, h	a, h	a, b, e
V. Individuals, Groups, and Institutions	b			b	b	a, e, f, g		h	b
VI. Power, Authority and Governance	c					d, i	f, h	j	
VII. Production, Distribution and Consumption						a	a, b, f, j	b, i, j	b, f
VIII. Science, Technology and Society				d (Enrichment)		f	e		c, e
IX. Global Connections	h	a		d, h	h	c, d, e, f, g, h	c, d, e	h	a, c
X. Civic Ideals and Practices	c			c				i, j	c

*Letters refer to Performance Expectations in the *Curriculum Standards for Social Studies*.

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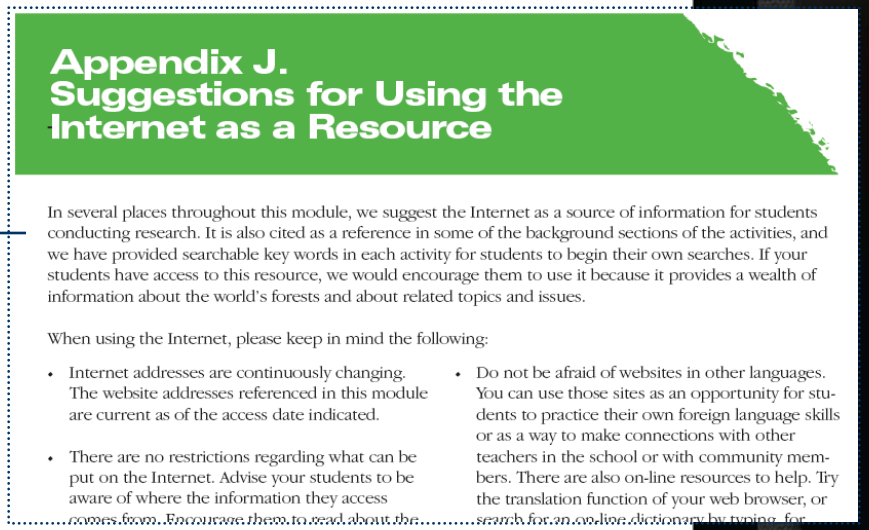
High School
National Council for the Social Studies

Standard	Activity 1 Making the Global Connection	Activity 2 What's a Forest?	Activity 3 Mapping the World's Forests	Activity 4 Analyzing Patterns of Forest Change	Activity 5 Understanding the Effects of Forest Uses	Activity 6 Seeking Sustainability: A Global Response	Activity 7 Exploring the World Marketplace	Activity 8 Making Consumer Choices	Activity 9 Researching Forests around the World
I. Culture	a	a, c, d, g		a	a, c	a	a	a	a, c
II. Time, Continuity, and Change				b	b	b		b	c
III. People, Places, and Environments		b, c, d, e, f, g, h, k	a, b, c, e, f	b, c, e, f, h, i, j	f, h	h, k	e, h, j	k	a, e, f, h, i
IV. Individual Development and Identity	a, b	a, f			e	e	e, h	a, h	a, b, e
V. Individuals, Groups, and Institutions	b			b	b	a, e, f, g		h	b
VI. Power, Authority and Governance	c					d, i	f, h	j	
VII. Production, Distribution and Consumption						a	a, b, f, j	b, i, j	b, f
VIII. Science, Technology and Society				d (Enrichment)		f	e		c, e
IX. Global Connections	h	a		d, h	h	c, d, e, f, g, h	c, d, e	h	a, c
X. Civic Ideals and Practices	c			c				i, j	c

*Letters refer to Performance Expectations in the *Curriculum Standards for Social Studies*.

Appendix J: Suggestions for Using the Internet as a Resource page 150

Helpful tips for using internet as resource with your students



Appendix J. Suggestions for Using the Internet as a Resource

In several places throughout this module, we suggest the Internet as a source of information for students conducting research. It is also cited as a reference in some of the background sections of the activities, and we have provided searchable key words in each activity for students to begin their own searches. If your students have access to this resource, we would encourage them to use it because it provides a wealth of information about the world's forests and about related topics and issues.

When using the Internet, please keep in mind the following:

- Internet addresses are continuously changing. The website addresses referenced in this module are current as of the access date indicated.
- There are no restrictions regarding what can be put on the Internet. Advise your students to be aware of where the information they access comes from. Encourage them to read about the
- Do not be afraid of websites in other languages. You can use those sites as an opportunity for students to practice their own foreign language skills or as a way to make connections with other teachers in the school or with community members. There are also on-line resources to help. Try the translation function of your web browser, or search for an on-line dictionary by typing "for

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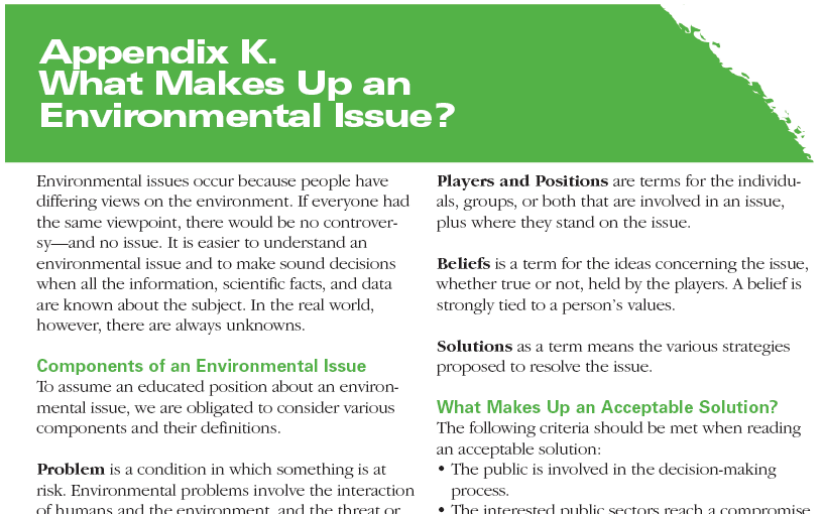
Appendix K: What Makes Up an Environmental Issue? page 151



Appendix K. What Makes Up an Environmental Issue?

Environmental issues occur because people have differing views on the environment. If everyone had the same viewpoint, there would be no controversy—and no issue. It is easier to understand an environmental issue and to make sound decisions when all the information, scientific facts, and data are known about the subject. In the real world, however, there are always unknowns.

Components of an Environmental Issue

To assume an educated position about an environmental issue, we are obligated to consider various components and their definitions.

Problem is a condition in which something is at risk. Environmental problems involve the interaction of humans and the environment, and the threat or

Players and Positions are terms for the individuals, groups, or both that are involved in an issue, plus where they stand on the issue.

Beliefs is a term for the ideas concerning the issue, whether true or not, held by the players. A belief is strongly tied to a person's values.

Solutions as a term means the various strategies proposed to resolve the issue.

What Makes Up an Acceptable Solution?

The following criteria should be met when reading an acceptable solution:

- The public is involved in the decision-making process.
- The interested public sectors reach a compromise

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Environmental issues occur because people have differing views on the environment. If everyone had the same viewpoint, there would be no controversy—and no issue. It is easier to understand an environmental issue and to make sound decisions when all the information, scientific facts, and data are known about the subject. In the real world, however, there are always unknowns.

Components of an Environmental Issue

To assume an educated position about an environmental issue, we are obligated to consider various components and their definitions.

Problem is a condition in which something is at risk. Environmental problems involve the interaction of humans and the environment, and the threat or risk associated with that involvement.

Issue is a problem—or its solution—for which differing beliefs and values exist, usually involving two or more parties who don't agree. If students don't understand varying beliefs and values of the disagreeing parties, they won't understand the concept of an environmental issue.

Values as a term means the relative worth an individual places on something. Some examples used in labeling environmental values are as follows:

- Aesthetic refers to an appreciation of beauty through the senses.
- Cultural refers to the maintenance of the integrity of natural systems.
- Economic refers to the exchange of goods and services for money.
- Educational refers to the benefits derived from learning or instruction.
- Egocentric refers to a focus on self-satisfaction and personal fulfillment.
- Legal refers to the law and its enforcement.
- Recreational refers to the use of leisure time.
- Social refers to shared human empathy, feelings, and status, or to an interaction of the human condition.

Players and Positions are terms for the individuals, groups, or both that are involved in an issue, plus where they stand on the issue.

Beliefs is a term for the ideas concerning the issue, whether true or not, held by the players. A belief is strongly tied to a person's values.

Solutions as a term means the various strategies proposed to resolve the issue.

What Makes Up an Acceptable Solution?

The following criteria should be met when reading an acceptable solution:

- The public is involved in the decision-making process.
- The interested public sectors reach a compromise.
- The compromise meets objectives for managing the resource.
- The compromise conforms to law.

Appendix L: Metric Conversion Chart page 152

Appendix L.
Metric Conversion Chart

When You Know	Multiply by	To Find
	Length	
inches (in)	2.5	centimeters (cm)
feet (ft)	30	centimeters (cm)
	0.3	meters (m)
yards (yd)	0.9	meters (m)
miles (mi)	1.6	kilometers (km)
centimeters (cm)	0.4	inches (in)
meters (m)	3.3	feet (ft)
meters (m)	1.1	yards (yd)
kilometers (km)	0.6	miles (mi)
	Area	
square inches (in^2)	6.5	square centimeters (cm^2)
square feet (ft^2)	0.09	square meters (m^2)
square yards (yd^2)	0.08	square meters (m^2)
square miles (mi^2)	2.6	square kilometers (km^2)
acres	0.4	hectares (ha)
square centimeters (cm^2)	0.15	square inches (in^2)
square meters (m^2)	11.1	square feet (ft^2)
	12.5	square yards (yd^2)
square kilometers (km^2)	0.38	square miles (mi^2)
hectares (ha)	2.47	acres
	Mass (weight)	
ounces (oz)	28	grams (g)
pounds (lb)	0.45	kilograms (kg)
tons (2,000 lb)	0.9	tonnes (t)
grams (g)	0.04	ounces (oz)
kilograms (kg)	2.2	pounds (lb)
tonnes (t)	1.1	tons (2,000 lb)
	Volume	
fluid ounces (fl oz)	30	milliliters (ml)
gallons (gal)	3.8	liters (l)
cubic feet (ft^3)	0.03	cubic meters (m^3)
cubic yards (ft^3)	0.76	cubic meters (m^3)
milliliters (ml)	0.033	fluid ounces (fl oz)
liters (l)	0.26	gallons (gal)
cubic meters (m^3)	33	cubic feet (ft^3)
	1.3	cubic yards (ft^3)
	Temperature	
degrees Fahrenheit (°F)	5/9 (after subtracting 32)	degrees Celcius (° C)

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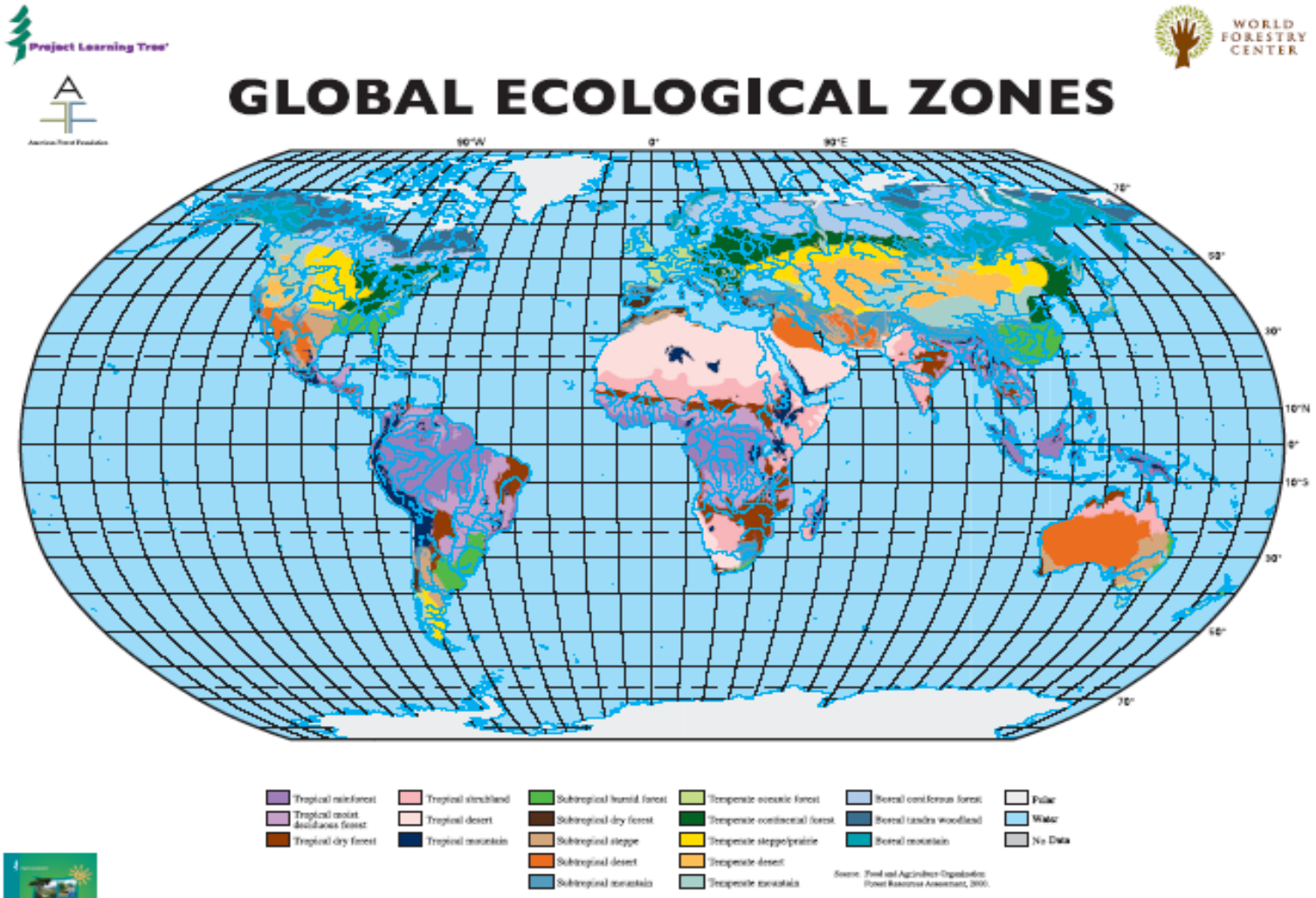
Global Ecological Zone Map



Project Learning Tree: www.plt.org
World Forestry Center: www.worldforestry.org

Activity 3. Mapping the World's Forests
Extreme Journeys

www.plt.org

Other PLT Secondary Guides

- Exploring Environmental Issues: Focus on Forests
- Exploring Environmental Issues: Municipal Solid Wastes
- Exploring Environmental Issues: Places We Live
- Exploring Environmental Issues: Focus on Risk
- Exploring Environmental Issues: Biodiversity
  Online at: www.plt.org
- The Changing Forest: Forest Ecology
- Global Connections: Forests of the World

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