



Curriculum

Module 8

Disappearing Forests

Overview

Middle Years of Schooling (Years 7 – 9)

Developed by: Hilary Macleod



Queensland Government
Education Queensland



Independent Schools
Queensland



Earth Charter
Australia



Brisbane Catholic
Education



Queensland Catholic
Education Commission

DISAPPEARING FORESTS – MODULE OVERVIEW

Rationale

Forests are one of our most valuable resources. They are complex ecosystems which provide habitats and food for animals, help protect soils and are essential for the regulation of the carbon cycle and climate. However we all use products of the forests and thus forests are being modified, destroyed or converted in many parts of the world. This module focuses on two hotspots visited by Brink Adventures where deforestation and forest conservation are important issues – South East Asia and Australia.

The World Resources Institute estimates that 8,000 years ago 47.7% of the world's land surface was covered with forests. A recent report indicates that nearly half of these forests have been lost and that in the last decade, 2% of total forest area and 4% of natural forest area has disappeared¹. South East Asia is one of the areas where deforestation is of most concern. At one point countries such as Thailand, Vietnam, Malaysia, Lao PDR, Indonesia and Cambodia could claim to have 100% forest cover. The forests in these areas are now being lost at an average rate of 1% per year since 1990.

The first part of this module examines the patterns of deforestation in the South East Asian region. It considers the many and varied values of forests and whether remaining forests can be sustainably managed. In the second part of the module we consider the pressures on Australia's remaining forests, examine not only a case study of campaigns to preserve these forests but also how individuals can have a say on the management of such forests. The emphasis in both parts is on how each of us is linked to forests and how, as active and informed citizens, we can play an important role in their survival.

Brink Adventures

In an epic test of endurance and resolve, the Brink Adventurers race against the seasons through some of the most difficult terrain and extreme weather on the planet, all the time attempting to use only human power and the natural elements. Brink Adventures is spurred on by a passionate determination to share 'real world' global experiences with the world's next generation. Teachers may choose to highlight the uncertainty surrounding Brink Adventures - drawing attention to the fact that in spite of the challenges of travelling through not only some of the planet's most difficult territories but also some of the world's most tumultuous societies, the Brink Adventurers have seized unexpected opportunities for rich experiences.

The Earth Charter

The Earth Charter provides the background and the decision making filter for Brink Adventures. The values and principles of the Earth Charter constitute a relevant and multi-layered opportunity for students to challenge and form their own ideas of democratic process, social justice, ecological and economic sustainability and peace. In particular, this module contributes to the understanding that the protection of Earth's vitality, diversity and beauty is a sacred trust. Being true to this sacred trust can require specific and concerted action to promote the recovery of endangered species and ecosystems.

¹ <http://forests.wri.org>
Brink Curriculum Module 8 – Disappearing Forests - Overview
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Keeping in touch with Brink Adventures

Schools can keep in touch with Brink Adventures through their website at www.brinkadventures.org. Using the website, teachers and students can read updates of the team's journal or join the Brink Adventures Schoolroom and register for "epals" or pen pals along the expedition route. The website also contains information about the places visited by the team.

Focus questions

Throughout the two parts to this module students will be confronted with a range of sub questions to investigate. However the overall focus questions for the module are:

1. What challenges are facing the world's forests?
2. Why do we need to work for the future survival of the world's forests?
3. How is the issue of ecological sustainability connected to economic sustainability?
4. What are some socially just and peaceful ways of resolving or managing these issues?

Introduction to Brink Adventures

Disappearing Forests is a multi-level module that caters for students in the Middle Phase of Learning (Years 7– 9). Many of the activities span a range of levels with variations to accommodate different conceptual levels and literacy levels in order to address individual differences in learning groups. The main focus of the module is to provide students with an opportunity to acquire knowledge about forests in South East Asia and Australia and the threats to their survival.

As an orientation to this module it is suggested that students could be engaged in a range of learning experiences to introduce them to Brink Adventures. Depending on the learning context, teachers may need to make minor modifications.

This section is designed to be used as an introduction to Brink Adventures. It can be used effectively in three different ways. Firstly, it can be used at the beginning of this unit to motivate adolescents who may not be interested in studying global issues. Young men embarking on an extreme adventure is likely to engage even the usually disinterested student. Secondly, this section could be introduced during the unit as students uncover the impacts people are having on the health of the planet and its people. In this context, the expedition could be presented as an example of people working for positive change and students could discover, along with the Brink Adventurers, the issues and ways to address them. Thirdly, this section could be used to refresh students' existing knowledge of rainforests by examining the experiences that have been encountered in previous legs of the expedition.

All components can be addressed with students from Years 7-9, with the complexity adjusted to suit students' capabilities. If teachers choose to assess work in this section it is suggested that parts one and two draw on aspects of English, especially text types – websites, email, journals and interviews. In section three, mapping activities can be designed and assessed using aspects of Studies of Society and Environment.

There are three components to this section:

1. An introduction to the Brink Adventures website
2. A look at the logistics of planning the expedition
3. Using mapping skills to follow the progress of the Brink Adventurers and their prior experiences of rainforests on the expedition route

Component	Suggested teaching and learning activities	Resource sheets
Introduction to the Brink Adventures website	<ul style="list-style-type: none"> • Taking a tour of the website • Sending the team an email • Reading their journals 	<ul style="list-style-type: none"> • A website quiz • How to send an email • Journal reflections
Planning an expedition	<ul style="list-style-type: none"> • Planning for adventure • Reading an interview with the team 	
Mapping the journey	<ul style="list-style-type: none"> • Following the expedition in the classroom 	<ul style="list-style-type: none"> • A map of the route

Essential Learnings

Throughout this module, students are given multiple opportunities to demonstrate their knowledge and understanding in relation to the history of deforestation and future implications for South East Asia and Australia. Teachers may choose a range of possible assessment opportunities from both the Science and Studies of Society and Environment: Essential Learnings for Years 7 and 9.

Investigation 1: South East Asia

What are the different values (uses) of rainforests?

SOSE – Year 9 Juncture - Place and Space

- Interrelationships between human activity and environments result in particular patterns of land and resource use, and can cause environmental problems

How have patterns of deforestation changed over time? (Web investigation and Statistical analysis)

SOSE – Year 7 Juncture - Place and Space

- Distribution maps, climate zone maps and weather maps have specific features to convey information, including latitude, longitude, eight compass points, scale and distance, a legend and shading and/or symbols

SOSE - Year 9 Juncture – Time, Continuity and Change

- Evidence of events in Australian, Asian, Pacific and global settings can be interpreted from different perspectives and values positions

Who buys tropical rainforest timber?

- **How are the demands for forest products balanced with other uses and values? (sustainable forest management model, Sabah)**

SOSE – Year 7 Juncture - Place and Space

- Australian environments are defined by patterns of natural processes, by human activities and by the relationships between them, including climate and natural resource distribution, resource use, and settlement patterns

How do indigenous groups in SE Asia value forests?

SOSE – Year 7 Juncture - Culture and Identity

- Contact between Indigenous and non-Indigenous cultures in Australia and in other places have had significant effects on language, culture, land ownership, health and education of Indigenous people

SOSE – Year 9 Juncture - Time, Continuity and Change

- Evidence of events in Australian, Asian, Pacific and global settings can be interpreted from different perspectives and values positions

What are the social, environmental, cultural and economic impacts of deforestation in SE Asia?

SOSE – Year 9 Juncture - Place and Space

- Australia, the Asia-Pacific region and other global settings are defined by a range of natural characteristics and processes, including landforms, vegetation and climatic zones, and human activities, including cultural, economic and political activity
- Interrelationships between human activity and environments result in particular patterns of land and resource use, and can cause environmental problems
- Governments and communities need to balance economic, social, political and environmental factors through sustainable development, consumption and production

Can forests be sustainably managed? (Model of SFM in Sabah)

Science - Year 7 Juncture – Science as a Human Endeavour

- Scientific knowledge can help to make natural, social and built environments sustainable, at a scale ranging from local to global

SOSE – Year 9 Juncture - Place and Space

- Governments and communities need to balance economic, social, political and environmental factors through sustainable development, consumption and production
- Interrelationships between human activity and environments result in particular patterns of land and resource use, and can cause environmental problems

What can we do to reduce deforestation in SE Asia?

- **How can we reduce the consumption of rainforest products?**
- **Which community and global campaigns are being used to raise awareness of the impact of deforestation?**

SOSE – Year 9 Juncture - Time, Continuity and Change

- Evidence of events in Australian, Asian, Pacific and global settings can be interpreted from different perspectives and values positions

SOSE – Year 7 Juncture – Place and Space

- Sustainability requires a balance between using, conserving and protecting environments, and involves decisions about how resources are used and managed

SOSE – Year 9 Juncture - Place and Space

- Interrelationships between human activity and environments result in particular patterns of land and resource use, and can cause environmental problems
- Governments and communities need to balance economic, social, political and environmental factors through sustainable development, consumption and production

SOSE – Year 9 Juncture – Political and Economic Systems

- Australian citizenship involves recognising global perspectives and balancing majority rule against respecting minority interests

Science - Year 7 Juncture – Science as a Human Endeavour

- Scientific knowledge can help to make natural, social and built environments sustainable, at a scale ranging from local to global

Science - Year 9 Juncture – Science as a Human Endeavour

- Responsible, ethical and informed decisions about social priorities often require the application of scientific understanding

Investigation 2: Styx Valley

What is the historical background to the Tasmanian forest industry and campaign to save the Styx Valley?

- **What are the different values stances and perspectives involved in this issue?**

SOSE – Year 7 Juncture - Time, Continuity and Change

- National traditions, celebrations and commemorations have evolved to reflect public sentiment and the perspectives, values and interpretations of different groups

SOSE – Year 9 Juncture - Time, Continuity and Change

- Evidence of events in Australian, Asian, Pacific and global settings can be interpreted from different perspectives and values positions
- Immediate and long-term consequences of human activity can be predicted by considering past and present events

How does the process of Environmental Impact Assessment apply to the forestry industry?

SOSE – Year 7 Juncture - Place and Space

- Natural hazards are a result of natural processes, and human activity can affect the impacts of these occurrences

SOSE – Year 9 Juncture - Place and Space

- Interrelationships between human activity and environments result in particular patterns of land and resource use, and can cause environmental problems

How are Australian forests managed?

SOSE - Year 7 Juncture – Place and Space

- Sustainability requires a balance between using, conserving and protecting environments, and involves decisions about how resources are used and managed
- Australian environments are defined by patterns of natural processes, by human activities and by the relationships between them, including climate and natural resource distribution, resource use, and settlement patterns

SOSE – Year 7 Juncture – Political and Economic Systems

- Australia is connected to other nations through international agreements, the responsibilities of global citizenship, and shared commitments to security and environmental issues

The Styx valley campaign:

- What?
- Where?
- Who?
- How?

SOSE – Year 7 Juncture – Place and Space

- Australian environments are defined by patterns of natural processes, by human activities and by the relationships between them, including climate and natural resource distribution, resource use, and settlement patterns

SOSE – Year 7 Juncture – Political and Economic Systems

- Australian citizenship involves values, attitudes and actions related to political equality and civil and human rights

SOSE – Year 9 Juncture – Time, Continuity and Change

- Evidence of events in Australian, Asian, Pacific and global settings can be interpreted from different perspectives and values positions

How can we take action to conserve the forests in our local area?

- forestry practices/conservation
- awareness of the need to protect and maintain the biodiversity and genetic variation of forests

SOSE – Year 9 Juncture – Place and Space

- Australia, the Asia-Pacific region and other global settings are defined by a range of natural characteristics and processes, including landforms, vegetation and climatic zones, and human activities, including cultural, economic and political activity
- Interrelationships between human activity and environments result in particular patterns of land and resource use, and can cause environmental problems
- Governments and communities need to balance economic, social, political and environmental factors through sustainable development, consumption and production

Science – Year 7 Juncture – Science as a Human Endeavour

- Scientific knowledge can help to make natural, social and built environments sustainable, at a scale ranging from local to global

Science – Year 9 Juncture – Life and Living

- Changes in ecosystems have causes and consequences that may be predicted

Module outline

Investigation Phase and focus questions	Learning Activities/	Resources
Tune In <ul style="list-style-type: none">• What does cutting down forests in South East Asia have to do with me?	<ul style="list-style-type: none">• Interpreting environmental cartoons• Smog! News reports and Brink interviews• Completing and discussing a personal actions checklist	<ul style="list-style-type: none">• Resource 1: Environmental Cartoons• Resource 2: News Reports• Resource 3: Personal Actions Checklist• Resource 4: Human Use of Rainforest Products

<p>Explore</p> <ul style="list-style-type: none"> • What do I already know? • What do I want to find out? 	<ul style="list-style-type: none"> • Starting the KWL activity 	<ul style="list-style-type: none"> • Resource 5: KWL Chart
<p>Look</p> <ul style="list-style-type: none"> • Where are the world's rainforests? • How have patterns of deforestation occurred over time? • Who buys tropical rainforest timber? • Can forests be sustainably managed? 	<ul style="list-style-type: none"> • Map work: Where are the world's rainforests? • Analysing statistics: <ul style="list-style-type: none"> ◦ Global and SE Asia Deforestation ◦ Tropical timber trade • A Case Study of the Sustainable Forest Management Project in Sabah, East Malaysia • Mini-investigation: Conducting an audit of shop products 	<ul style="list-style-type: none"> • Resource 6: Blank World Map • Resource 7: How Have Patterns of Deforestation Changed Over Time? • Resource 8: Who Buys Tropical Rainforest Timber? • Resource 9: TELSTAR investigation
<p>Sort</p> <ul style="list-style-type: none"> • What are the different values (uses) of rainforests? • How do indigenous groups in S E Asia value forests? • How are the demands for forest products balanced with other uses and values? 	<ul style="list-style-type: none"> • Values of a rainforest • Decision making activity: Trees – your money or your life?! • Mini-investigation: Sorting the results of the shop audit 	<ul style="list-style-type: none"> • Resource 10: Values of a Rainforest • Resource 11: Tree Template • Resource 12: Monetary and Non-monetary values
<p>Test</p> <ul style="list-style-type: none"> • What are the social, environmental, cultural and economic impacts of deforestation in S E Asia? 	<ul style="list-style-type: none"> • Futures wheel 	<ul style="list-style-type: none"> • Resource 13: Rainforest Futures Wheel
<p>Act</p> <ul style="list-style-type: none"> • What can be done to reduce deforestation? • How can I take action to conserve the forests of S E Asia? 	<ul style="list-style-type: none"> • Mini-investigation: Presenting the result of the shop audit • Debate 'Should Australia ban the import of all rainforest timber?' • Personal action statement 	
<p>Reflect</p> <ul style="list-style-type: none"> • What do I think? • What do I now know? 	<ul style="list-style-type: none"> • Values continuum activity • KWL chart 	<ul style="list-style-type: none"> • Resource 14: Values statements