

# Asia-Pacific challenges: World environments

## Strand

Place and Space

Systems, Resources and Power

## Core learning outcomes

### *Place and Space*

- PS 6.1** Students use criteria and geographical skills to develop conclusions about the management of a place.
- PS 6.2** Students create proposals to resolve environmental issues in the Asia-Pacific region.
- PS 6.3** Students initiate and undertake an environmental action research project based on fieldwork.
- PS 6.4** Students use maps, tables and statistical data to express predictions about the impact of change on environments.

### *Systems, Resources and Power*

- SRP 6.1** Students develop and test a hypothesis concerning a relationship between global economic and ecological systems.
- SRP 6.3** Students advocate to influence Australia's role in future global economies or environments.

## Purpose and overview

Geographical inquiry is used to assist students to develop their abilities to investigate a range of topics related to the Asia-Pacific region. These topics relate to natural environments, their effects on societies and the consequences of human management systems. Volcanic activities, rising ocean levels, sustainable use of rainforests and transmigration of populations are investigated. Students participate in fieldwork and communicate using maps, tables and statistical data. Students learn about the relationships between global ecological and economic environments and about how, as informed citizens, they might influence Australia's role in helping to improve environments and resource allocations. Overall, they learn about the ways in which people use and are influenced by Asia-Pacific landscapes.



<b>Phases</b> (Minimum time recommended: 12 hours)	<b>Activities</b>	<b>Core learning outcomes</b>	<b>Assessment opportunities</b>
<b>1. Focusing on the Asia–Pacific region</b>  (approximately 2.5 hours)	1. How are regions identified? 2. Asia–Pacific rollcall 3. Who's in and who's out? 4. What does this region look like? 5. Possible future impacts of natural environments	PS 6.1 PS 6.4 SRP 6.1	Formative assessment opportunities occur through self- and peer reviews as students become familiar with the process elements of these outcomes. Such reviews are described in 'Positions and guidelines on assessment and reporting for Years 1 to 10' which is available on the Queensland School Curriculum Council website.
<b>2. Investigating natural environments in the Asia–Pacific region</b>  (approximately 4 hours)	6. Volcanoes! 7. Field study of a local vegetation community 8. Accounting for other vegetation communities 9. The oceans are rising!	PS 6.1 PS 6.3 PS 6.4 SRP 6.1	The focused analysis completed in Task C (Resource 4) provides opportunities to assess PS 6.4 and SRP 6.1.  A field report incorporating action research components (Resource 5) provides opportunities to assess PS 6.1, PS 6.3 and PS 6.4.
<b>3. Analysing interactions between people and natural environments</b>  (approximately 4 hours)	10. The impact of global warming on Pacific Island countries 11. Field investigations in a local coastal environment 12. Sustainable forests	PS 6.2 PS 6.3 PS 6.4 SRP 6.1 SRP 6.3	A photographic essay created by students in Activity 12 could be used to assess at least PS 6.2.  Anecdotal notes taken while observing students during their research may be used to assess at least PS 6.3 and PS 6.4.  Self-assessment of SRP 6.1 can occur in Activity 11 and the advocacy proposal (Resource 9) offers opportunities to assess SRP 6.3.
<b>4. Finding solutions</b>  (approximately 1.5 hours)	13. Optimum populations 14. Evaluating the transmigration solution 15. A view into the future	PS 6.1 PS 6.2 PS 6.4 SRP 6.1 SRP 6.3	Small-group reports (Resource 11) offer opportunities for self-, peer and teacher assessment of PS 6.2, SRP 6.1 and SRP 6.3.  Structured interviews in Activity 14 could be used to assess PS 6.1 and PS 6.4, while the collage completed in Activity 15 offers opportunities to assess most of the learning outcomes.

## Assessment

The assessment opportunities outlined are examples of how to assess students' demonstrations of the identified learning outcomes. As often as possible, negotiate assessment with students and support a variety of ways of demonstrating the learning outcomes. Reflect with students on evidence gathered when making judgments about their demonstrations of learning outcomes. Some students may require more time and/or other contexts in which to demonstrate these learning outcomes. Other modules may provide such time and/or contexts and the 'Levels 1 to 6 module learning outcomes maps' in the *Years 1 to 10 Studies of Society and Environment Sourcebook Guidelines* can be used to identify these modules.

### **Resources 5 and 11**

Two assessment opportunities could provide the necessary evidence of students' demonstrations of learning outcomes. These could be the construction of an individual field study report and a small-group report incorporating self- and peer assessment with

teacher validation. Samples of such assessment items are provided as Resource 5 and Resource 11. Students should be aware in advance of assessment requirements and learning outcomes. Other opportunities to gather evidence of students' demonstrations of learning outcomes are described in the overview table and include photographic essays, observations of students during group research and presentation activities and self- and peer assessment. Most assessment opportunities could occur in class time and could be directed toward individuals or groups.

**Resource 9** Resource 9 provides an additional opportunity to assess students' demonstrations of SRP 6.3. This core learning outcome involves the ability to advocate and is an inherent part of active and informed citizenship.

**Assessing learning outcomes at different levels**

Activities are designed primarily for students working towards demonstrations of Level 6 learning outcomes. Assessment opportunities may be used to decide whether students are demonstrating the learning outcomes at levels before or after Level 6. To guide judgments about students' demonstrations of learning outcomes, consider whether students are:

- working towards demonstration of the Level 6 learning outcomes
- demonstrating the Level 6 learning outcomes
- demonstrating the Level 6 learning outcomes and working towards Beyond Level 6 learning outcomes.

Learning outcomes in the syllabus at Level 5 and Beyond Level 6 could provide a guide for teacher judgments. Studies of Society and Environment learning outcomes are organised so that there is a progression in terms of concepts and processes within a strand. For example, the progression from SRP 5.3 to SRP 6.3 to D6.3 (the discretionary level Beyond Level 6) involves increasing sophistication and complexity, particularly related to the concept of *participation and decision making* and the process of *participating*, though neither of these is exclusive of other concepts and processes. The elaborations provide specific content examples of how the concepts and processes may be levelled from Levels 1 to 6. See the Queensland School Curriculum Council website at [www.qscc.qld.edu.au](http://www.qscc.qld.edu.au) for more information.

**Resource 5** Core learning outcomes are organised in levels that assist teacher judgments. Refer to Resource 5 where the field study report proposals should be created to implement sustainable management practices (PS 6.1). In a report, such a proposal is likely to include a strategy for evaluating the management plan (PS 5.2), but it will go further and suggest solutions to the evaluated issue.

## Using this module

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The activities assist students to manage and direct inquiries and to report on their findings. Activities involve:

- geographical and social inquiry. For more information on such inquiries, refer to 'Inquiry processes in secondary SOSE' and 'Geography in Years 1 to 10 SOSE' on the Queensland School Curriculum website.
- all key Studies of Society and Environment inquiry processes, but with an emphasis on investigating and participating
- skills to assist in the transition from Year 10 to Year 11
- conducting and using results from field studies.

**Resource 13** The phases and activities relate to the key questions of geographical inquiries as described in Resource 13. In these inquiries, the physical scene is explored, human societies are located within it and issues that have arisen as a result of the relationship between people and their environments are analysed to focus on solutions.

**Preparation** Read through all of the activities as some will require preparation of resources. In preparing for this module, it is important to acknowledge that the period since 1945 has seen a change in focus for the Australian nation. Traditional Commonwealth ties with Britain have been replaced by a development of links with the nations of the Asia–Pacific region. The future of these nations and of Australia is bound by physical, political and economic realities that cannot be overlooked.

The Asia–Pacific region has been defined in this module as those nations that either have borders along the western Pacific Ocean or are actually located within the western part of the Pacific Ocean. This includes countries that range in scale from China — which is large in terms of both area and population numbers — to island nations such as Kiribati, which are small in terms of area and population numbers. Within this defined geographical region, studies will be undertaken at a variety of scales from local through to global.

## Background information

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### Terminology

In this module students have opportunities to become familiar with and use the following terminology:

climate	global scale	regional scale
colonisation	greenhouse gases	scale superpower
communism	land bridge	sustainability
contour	local scale	topography
democracy	national scale	weather

### School authority policies

Be aware of and observe school authority policies that may be relevant to this module, particularly those related to involvement in field studies.

### Equity considerations

Activities take place in a supportive environment. They provide opportunities for students to increase their understanding and appreciation of equity through valuing diversity and challenging inequities. Activities encourage students to:

- advocate on behalf of people who may be disadvantaged by the dominant lifestyle of Australians
- challenge practices that are detrimental to the environment and advocate for changes
- challenge the environmentally destructive policies and practices of governments and corporations and empower others to do the same.

Some students with disabilities may need assistance with some activities. Advice should be sought from their support teachers. It is important that these equity considerations inform decision making about teaching strategies, classroom organisation and assessment.

### Links

#### *Studies of Society and Environment*

This module is one of a suite of modules for Levels 1 to 6. See the Queensland School Curriculum Council website at [www.qscc.qld.edu.au](http://www.qscc.qld.edu.au) for more information.

#### *Other key learning areas*

Activities may offer opportunities for planning across key learning areas. However, it is important that the integrity of the key concepts, organising ideas and processes within key learning areas is maintained.

### **Evaluation of a unit of work**

After completion of units of work developed from this module, collect information and make judgments about:

- teaching strategies and activities used to progress student learning towards demonstrations of core learning outcomes
- opportunities provided to gather evidence about students' demonstrations of core learning outcomes
- future learning opportunities for students who have not yet demonstrated the core learning outcomes and to challenge and extend those students who have already demonstrated the core learning outcomes
- the extent to which activities matched needs of particular groups of students and reflected equity considerations
- the appropriateness of time allocations for particular activities
- the appropriateness of resources used.

Information from this evaluation process can be used to plan subsequent units of work so that they build on, and support, student learning. The evaluated units of work may also be adapted prior to their reuse. For further information, refer to the 'Curriculum evaluation' section in the sourcebook guidelines.

## Activities

### Phase 1 Focusing on the Asia–Pacific region

**Core learning outcomes emphasis: PS 6.1, PS 6.4, SRP 6.1**

In this phase, students are introduced to sets of criteria by which regions can be defined. They use these criteria to identify the particular characteristics of the Asia–Pacific region. Students identify in general terms how these geographical, political and economic characteristics impact upon people in the Asia–Pacific region and frame hypotheses about the origins of these characteristics. (These origins are explored in more detail in Phase 2, while the impact of some of the physical characteristics is explored in more detail in Phase 3.)

**Focus questions:**

- What is a ‘region’?
- What distinguishes the Asia–Pacific region?
- What are some of the origins of the physical geography of the Asia–Pacific region?
- Which countries form the Asia–Pacific region?
- How does living in the Asia–Pacific region affect people?

#### Activity 1 How are regions identified?

**Teaching considerations**

The purpose is to introduce students in general terms to the characteristics of the region in which they live. Prior research into the specific characteristics of a local region, perhaps through a local government website, may enable you to make this introduction more relevant.

#### Resource 1

Ask students to complete Resource 1 to help them develop an understanding of particular characteristics or criteria that can define a region. Discuss their answers and explain that they live in a distinctive local region that forms part of a wider region. Use photographs, videotapes and maps to examine a variety of natural and built landscapes and classify them in terms of region. Refer to physical boundaries, such as the watersheds defining a catchment or the limits of a vegetation, as well as human boundaries, such as political boundaries or the limits of a water supply system. Ask questions such as:

- What are the physical boundaries of the local region?
- In what local government region do you live?
- What are the human demographic characteristics of your region? (For example: total population, population growth, median age, number of people who are aged under 15 or over 65, unemployed, born in a non-English-speaking country, number of families with an income below \$15 600.)
- How does the boundary of an identified physical region compare with the local government region?
- What other types of regions can be identified?

#### Activity 2 Asia–Pacific rollcall

#### Support materials and references

**Teaching considerations**

Many blank outline maps of the Asia–Pacific region are available on the Internet. Refer to ‘Support materials and references’ for details.

#### Support materials and references

Refer students to relevant sections of textbooks such as Alexander and Rouen (2000, pp. 74–98) or McCauley, Brown and Mills (2001, pp. 248–272) and ask them to:

- use maps to identify countries that border the Pacific Rim region
- compare textbook maps of the Asia–Pacific region with an atlas map to identify commonalities
- begin to create their own map of the region by adding names of countries to a blank outline map
- add the names of significant bodies of water to their maps: oceans, seas and straits
- use different sources to identify nations in the Asia–Pacific region.

Ensure students adhere to mapping conventions.

**Resource 2** Ask students to complete Resource 2 to assist them to recognise symbols and compile results in a tabular form.

### Activity 3 Who's in and who's out?

#### Teaching considerations

Although students are exploring possible boundaries of the Asia–Pacific region, the activities tend to focus on Australia, Asia and the island nations of the South Pacific. Discussions during this activity may need to prompt students to include at least these areas in their definitions.

**Resource 3** Assist students to examine the map of the Asia–Pacific region they have created to determine some regional boundaries and to describe these boundaries using degrees of latitude and longitude. Discuss criteria they could use to determine whether various countries should be included in the Asia–Pacific region. Assist students to apply these criteria as they complete Resource 3.

### Activity 4 What does this region look like?

Assist students to use atlases and textbooks to locate and discuss some of the distinctive landscapes of the Asia–Pacific region. Ensure the region's physical and human diversity is clearly emphasised and that the following features are referred to:

- weather patterns
- climate and human activity
- an area that has experienced recent significant earthquake activity
- a volcano that has been recently active
- topography, including a mountainous area where peaks exceed 3 000 metres
- an ocean trench
- an area covered in rainforest vegetation
- a coral atoll
- a shallow sea (< 250 metres)
- a city of more than five million people
- an uninhabited island
- an archipelago.

### Activity 5 Possible future impacts of natural environments

#### Support materials and references

#### Teaching considerations

This activity involves the creation of a hypothesis. To clarify how the development of a hypothesis can relate to a social and environmental inquiry, refer to 'Inquiry processes in secondary SOSE' and 'Geography in Years 1 to 10 SOSE' on the Queensland School Curriculum Council website. Current research on websites such as that of the School of Geography and the Environment at the University of Oxford can also be useful.

A hypothesis is a proposed explanation for something. It constitutes a provisional answer to a research question or questions. An example of a research question from the University of Oxford's website is:

'What are the factors that have determined recent spatial changes (production of new places) at intraregional levels in Russia's oil producing regions?'

Questions for students do not need to be so conceptually difficult, but can contain similar elements. That is, the question should contain clear time and place boundaries and a clear topic. The question also needs to be constructed so that students are able to answer it with accessible resources. Questions should *not* invite immediate closure (yes or no type answers). Given that new evidence and perspectives are always emerging, conclusions to social and environmental inquiries are always tentative.

**Resource 13** This activity could be guided by a key question such as 'What are the possible future impacts of natural environments on people in the Asia–Pacific region?'. Such a question invites related questions such as: 'What are the physical characteristics of the Asia–Pacific region?' and 'How might residents of the region be affected?'. It also requires students to consider how and why those physical characteristics came to exist, which is the focus of Phase 2. Subsequent phases follow the sequence of questions provided in Resource 13. Phase 3 considers *impacts* of Asia–Pacific environments and their consequences, while Phase 4 focuses on *what can be done to improve the situation*.

Review the criteria that can be used to define the Asia–Pacific region and understandings about regional demographics. Explain that many of the human characteristics of the region, such as poverty, have their origin in historical factors such as colonialism, but emphasise that the focus of this module is the impact of physical geography on people and the impact of people on their physical environments.

Ask small groups to develop a hypothesis in answer to the question ‘How might people in the Asia–Pacific region be affected by their natural environments in the near future?’. This is preparatory work for demonstrating SRP 6.1.

Ask one member of each group to move to another group and explain the hypothesis they just developed. After discussion, encourage all groups to modify their original hypotheses where necessary. Pause discussions to revise the characteristics of a useful hypothesis. This is a topic that is likely to have been covered in earlier modules in a number of key learning areas, including Studies of Society and Environment and Science. Ask students to adjust their hypotheses to ensure they include the characteristics of a useful hypothesis.

Explain that these hypotheses will be tested during activities in the next phases and that the activities concentrate on the impact people have on two geographical characteristics: vegetation patterns and rising ocean levels. The impact another characteristic — volcanoes — has on people is also explored. Explain that to further develop and test the hypotheses, the causes of the region’s natural characteristics need to be investigated and this is the focus of the next phase.

## Phase 2 Investigating natural environments in the Asia–Pacific region

*Core learning outcomes emphasis: PS 6.1, PS 6.3, PS 6.4, SRP 6.1*

In this phase, students test the hypotheses they created about the possible impacts that natural environments might have on people in the Asia–Pacific region. In the process, they investigate volcanic activity, vegetation patterns and rising oceans.

*Focus questions:*

- Why does volcanic activity occur?
- How does volcanic activity affect people?
- What characterises vegetation of a region?
- What are the patterns of vegetation in the Asia–Pacific region and why do they occur?
- How do changes to vegetation influence people?
- How have oceans influenced people in the Asia–Pacific region and why are oceans rising?

### Activity 6 Volcanoes!

**Teaching considerations**

Organise a class set of atlases containing tectonic plate maps that show movement of the plates. Access the Internet or textbooks so students can locate where volcanoes are currently active. CDs such as the one identified in ‘Support materials and references’ are also useful.

**Support materials and references**

**Resource 4**

Ask students to complete Task A on Resource 4. Assist them to use the Internet and other resources to:

- investigate reasons for the level of volcanic activity in the region
- explore why Australia is relatively free of this activity
- make any additions or modifications to their hypotheses so that they more accurately answer the key question of Activity 5.

As students develop understandings about how volcanic activity influences human behaviour, discuss the impact in terms of economic behaviours — for example, farming on the rich soil of volcanic slopes (SRP 6.1).

**Resource 4**

Assist students to use the Internet and other resources, including recent textbooks, to complete Task B on Resource 4. Students complete these tasks individually (think), then discuss findings with a partner (pair), before discussing them with larger groups (share). Task C on Resource 4 could be used for students who have not demonstrated PS 6.4 and/or SRP 6.1.



## Activity 7 Field study of a local vegetation community

### Teaching considerations

As Queensland is part of the Asia–Pacific region, a field trip to a local environment can be a useful way of developing understandings of vegetation patterns in the Asia–Pacific. These understandings about the causes of natural vegetation distribution are important background for the study of managing rainforests that occurs in the next phase. A local field study can help students appreciate biodiversity, ecological interdependence between countries and the complexities involved in finding a balance between ecological and economic sustainability in a region.

### Resource 5 Support materials and references

Resource 5 is likely to need modification to accommodate the chosen local field study site. A number of fieldwork techniques can be used to build students' understandings of vegetation communities and the natural and cultural factors that impinge upon them. These techniques include photography, sketch map drawing, quadrant exercises, vegetation mapping, management planning, making observations and writing a report. You may wish to consult student textbooks that provide suggestions for conducting field studies. A number of websites also offer useful advice — a search for 'geography fieldwork' should locate sites such as the Department of Natural Resources and Mines and Virtual Fieldwork for Geographers. When choosing a location for fieldwork, consider vegetation communities that are endemic and have been or could be involved in developmental proposals. Suggestions include:

- mangrove areas
- remnant bushland in urban areas
- rainforest remnants in agricultural land
- state forests in which multiple-use management is practised.

### Resource 5

Organise a field study and ask students to complete a field study report (Resource 5). Fieldwork activities contribute to the demonstration of learning outcomes PS 6.1, PS 6.3 and PS 6.4.

Drafting of reports from the field study can occur simultaneously with the next activity. Findings about the impact of change on environments and links between geographic conditions and vegetation should begin to emerge.

## Activity 8 Accounting for other vegetation communities

Provide students with a class set of atlases and a blank outline of the Asia–Pacific region. Ask students to randomly place 15 dots on land areas on their blank maps and to number the dots from 1 to 15.

### Resource 6

Ask each student to use an atlas to find the information needed to complete the table on Resource 6 that cross-matches vegetation types with a range of geographical characteristics. Assist students to establish relationships between the vegetation types and the variables identified. This should lead to the development of hypotheses about the relationships between vegetation and certain variables. Ask students to use atlases and relevant sections of textbooks to test these hypotheses by focusing on rainforests. Encourage students to consider what other variables could affect the distribution of rainforests and expand their Resource 6 hypotheses to link rainforests with economic activities such as agriculture, logging and tourism.

## Activity 9 The oceans are rising!

Provide students with a map of the Asia–Pacific region. Explain that approximately two million years ago, sea levels were 150 metres below their current levels. Ask students to consider areas that would have been exposed as land two million years ago. Discuss the following questions:

- Are countries/landmasses the same shape today as two million years ago?
- How has the shape of familiar landmasses changed during the two million-year period?
- Where may some land bridges have once existed?
- How would a lower sea level have affected the Asia–Pacific region in the past in terms of the spread of people, animals and plants?
- Not all the Indigenous peoples of the Asia–Pacific region arrived at their homelands by crossing land bridges. How else might they have arrived?

- How were plant and animal species able to cross ocean barriers to colonise new land areas?
- Why may the oceans be rising?

When discussing the last question, establish how much prior knowledge students have about global warming and climate change and what they recall from earlier activities about tectonic plate movements. Raise the possibility that oceans may be rising for a combination of reasons, some natural and some caused by the actions of humans. Explain that human actions will be explored further in the next phase.

### Phase 3 **Analysing interactions between people and natural environments**

**Core learning outcomes emphasis: PS 6.2, PS 6.3, PS 6.4, SRP 6.1, SRP 6.3**

Students use Internet sites, real or virtual field studies, maps and photographs to analyse issues of global warming and deforestation. This phase emphasises visual literacies and introduces patterns of human geography that are re-visited in the final phase.

**Focus questions:**

- How are changes to natural global environments affecting environments in the Asia–Pacific region?
- How are changes to global patterns of human population affecting environments in the Asia–Pacific region?
- How can we create better futures?

#### **Activity 10 The impact of global warming on Pacific Island countries**

**Teaching considerations**

It is likely that students will be familiar with the concept of the greenhouse effect, but it is important to establish their level of understanding before explaining it in detail.

**Support materials and references**

Case studies are a useful way of highlighting the human dimension of global warming. Use visual stimuli such as maps and photographs to introduce the geographic location of a Pacific Island country, such as Kiribati, the Cook Islands, Tokelau (Territory of New Zealand), Tuvalu or the Marshall Islands. Refer to relevant sections of Alexander and Rouen (2000) and websites that provide maps and country profiles, such as the CIA website. Explain that people who live in these countries are very concerned about possible sea level rises. Discuss what some of these concerns may be and list and display the possible effects of rising sea levels for later reference.

Explain that United Nations programs have emphasised that climate change will exacerbate poverty and hunger in many parts of the world that are already poor and that many Pacific Island countries facing threats from rising sea levels have requested action from wealthier, polluting countries such as Australia, Japan and the United States to save their islands. Ask students if they can recall what Australia could do to counteract rising sea levels. (Refer to Activity 9.) Discuss the greenhouse effect. Ensure that students understand that humans have burnt so much fossil fuel, especially coal and petrol, that the atmosphere is now higher in carbon dioxide and the ‘greenhouse effect’ has increased.

If necessary, use textbook activities to clarify the meaning of the greenhouse effect. Encourage students to find out what the Kyoto protocols are and what Australia’s relationship to them is. Ask the question ‘What could we do?’. Discuss possibilities at individual, group and national levels. Mention that several electricity producers now advertise electricity that is generated by renewable energy sources such as solar, wind or water power, rather than by burning coal. Investigate whether renewable energy sources are used locally.

**Resources 7, 8 and 9**

Distribute and discuss Resources 7, 8 and 9. As students complete Resource 7, they are likely to be adding to the list of possible effects of rising sea levels that they created earlier. Invite some students to update the list that is on public display. Ensure that effects on agriculture, forestry and fishing industries are included and consider adding effects on housing, water resources, heritage sites and human health.

Discuss possible solutions to the identified effects and distribute information relevant to completing the retrieval table (Resource 8). This could be a summary of information derived from textbooks or earlier exposition and can act as reinforcement of key ideas. This summary will also assist students to begin preparing a presentation that advocates influencing Australia's position on greenhouse gas emissions (Resource 9). The activities generated by Resource 9 provide opportunities for assessment of SRP 6.3. Resource 8 can also provide opportunities for students to think creatively and negotiate ways that the information may be related to other core learning outcomes.

Other actions that could be advocated for include:

- the removal of federal and state government subsidies to polluters
- refuge for people whose homelands are destroyed by global climate change
- specific changes to local environments.

Actions such as these are the focus of the next activity.

### **Activity 11 Field investigations in a local coastal environment**

#### **Teaching considerations**

Although students will probably not be able to undertake field studies on the low isles of the Pacific Ocean, a field trip to a local coastal location will provide illustrative case studies of interactions between human activity and near tidal zones. A hypothetical projection of higher ocean levels will illustrate the consequences of serious global warming (SRP 6.1). If a field trip to a coastal region is not possible, a virtual field trip or speculations based on flooding in a local area could be conducted instead.

In the field, have students investigate a management strategy that may already have been instigated to reduce the impact of human actions on the physical environment of a coastal location. For example:

- dune stabilisation schemes
- rock retaining walls
- groynes
- revegetation
- access management
- fishing management.

Whether in real or virtual settings, the investigation should include the following elements:

- identification of the initial problem (this may occur before the fieldwork)
- description of human activities that have probably caused this situation
- collection of fieldwork data using a variety of measurement instruments
- response to the data — for example, revision of initial hypothesis as to what probably caused the situation
- description of any attempted management plan and/or physical structures that have been instigated
- evaluation of the solutions that have been put into place
- prediction of future changes in this environment
- development of a management strategy to overcome deficiencies in the situation under investigation.

Draw students' attention to how these elements relate to learning outcomes. For example, in responding and evaluating, students are involved in an action research project based on fieldwork (PS 6.3) and they should be using criteria to evaluate solutions (PS 6.1). Where discretionary time is available, implementation of strategies could continue after the module is completed.

Encourage students to refer to photographs and field sketches as part of their observations. They should make comparative field sketches showing the landscape with current ocean levels and the same landscape should the ocean rise two or three metres.

**Resource 5** Fieldwork should involve compiling maps, tables and statistical data (PS 6.4). For students who have not yet demonstrated the outcomes emphasised in this phase, this fieldwork should result in a field study report modelled on Resource 5. The exact content of the report will vary according to locations, but it must be about the impact of changes on environments (PS 6.4) and students must have been involved in some responses to data during the fieldwork (PS 6.3). Students could be made aware that you will be looking for such demonstrations of outcomes during the fieldwork. Take anecdotal notes regarding student demonstrations and ask those students who have not yet demonstrated PS 6.1, PS 6.3 or PS 6.4 to provide written or, where appropriate, oral (perhaps taped) evidence of demonstrations of these learning outcomes. Involve these students in self-assessment of the type described in more detail in the Queensland School Curriculum Council position paper 'Position and Guidelines on Assessment and Reporting in Years 1 to 10'.

Encourage students who have already demonstrated these learning outcomes to focus on SRP 6.1 and to develop a hypothesis about the possible impact of the global economy on the ecological system they are observing during the fieldwork. This may require some creative and lateral thinking. If these students can test their hypotheses while in the field they may also be able to assess whether or not they have demonstrated the learning outcome and provide justification for their decision.

## Activity 12 Sustainable forests

### Support materials and references

#### Teaching considerations

Use resources such as the websites of the Asia–Pacific Forestry Commission, The Australian Rainforest Conservation Society and The National Association of Forest Industries (NAFI) as well as textbooks for background information. The Indonesian burn-offs that made world headlines in 1997 may be a useful starting-point.

Depending on the time available, either provide students with information that describes how humans and forests are mutually dependent or have students locate the information for themselves, using the Internet and textbooks. Gather a selection of photographs showing recent examples of human economic activity in a regional forest environment. Emphasis should be given to locating images showing economic activity in an environment where there are competing economic and ecological interests. Students could select photographs with appropriate captions and insert them into electronic documents. In groups, ask students to arrange the photographs according to certain criteria, such as thematic, regional or historical.

Having decided how the photographs should be organised, students discuss initial perceptions and tentative ideas about how competing interests can be reconciled. Encourage students to use text-based activities and the Internet or evidence supplied to them to test these hypotheses. Conclusions regarding the use of forests could be communicated as photographic essays and published electronically. Opportunities will be created for assessment of learning outcomes such as PS 6.2.

## Phase 4 Finding solutions

**Core learning outcomes emphasis: PS 6.1, PS 6.2, PS 6.4, SRP 6.1, SRP 6.3**

Students may have already considered some solutions to environmental issues such as climate change and deforestation in the Asia–Pacific region. For example, they may have considered the use of renewable resources to generate electricity as a way to reduce greenhouse gases. This phase offers opportunities to continue to explore and advocate for these solutions. It also provides opportunities for students to evaluate the transmigration of populations as a solution.

#### Focus questions:

- What are the environmental challenges faced by nations in the Asia–Pacific region?
- How might population sizes, densities and locations affect the environmental challenges faced by nations in the Asia–Pacific region?
- What are some predicted and preferred population distributions and growths in the Asia–Pacific region?
- Could transmigration offer some solutions to environmental challenges?

### Activity 13 Optimum populations

#### Teaching consideration

This activity focuses on population growth and distribution in the Asia–Pacific region. Students will need calculators as well as a class set of atlases. Development of an electronic spreadsheet would enable students to present the demographic data in graphical form.

Review the challenges for the Asia–Pacific region that have been identified so far and list some of the possible solutions. Ask students to complete a think/pair/share activity where they consider how the size, growth and location of populations may contribute to the environmental challenges facing the Asia–Pacific region. Discuss the extent to which solutions to the environmental challenges may be found in policies concerning population.

#### Support materials and references

Use textbook-based exercises related to demographic statistics and population growth (such as chapter 7 of Alexander and Rouen 2000 or chapter 10 of McCauley, Brown and Mills 2001). These exercises will help to clarify the criteria that can be used to make decisions about population policies and will provide students with experience in using graphs of populations and food production. As well as population growth, refer students to data on other demographic features such as population density.

Assist students to explore the population details for a particular country. These are available on several websites. Students complete a think/pair/share activity concerning an ideal population level for that country.

#### Resource 10

Use Resource 10 to collect and discuss population levels and growth rates of selected countries. Ask students to calculate the ratio between each country's population and Australia's population. The last column is for 'Anticipated population in a future year' — for example, ten years from now. Completing the last column will involve the use of calculators.

#### Resource 11

Using Resource 11, students self- and peer assess three core learning outcomes. Completion of this resource could involve both homework and some time in the library. It focuses students' attention on finding solutions to a range of issues, including population issues. It could be distributed now and their work on the tasks could be interrupted to enable them to explore the transmigration solution (Activity 14). Alternatively, continue with Activity 14 now and then distribute Resource 11.

### Activity 14 Evaluating the transmigration solution

Explain that Indonesia has had a policy of settling its less densely populated islands through the transmigration of people from overcrowded areas. The government has used a combination of incentive and subtle pressure to get people to move from one area to another. Ask students whether Australia should open up the interior of the country for settlement by:

- people from overcrowded areas of the Asia–Pacific
- people from areas adversely affected by global warming.

#### Resource 11

The answers to these questions should help to establish why some places are sparsely settled. Use these questions to generate discussion about migration of people from the Asia–Pacific region to Australia and possible areas that would be suitable for settlement. Encourage students to think of ideas for the advocacy included in SRP 6.3 and described in Resource 11. Care needs to be taken to minimise the potential for xenophobia to emerge.

Provide a class set of atlases and blank outline maps of the Asia–Pacific region. Ask students to colour their maps to identify areas with fewer than ten people per square kilometre and with more than ten people per square kilometre. Assist students to examine the map and use the think/pair/share strategy to identify two locations in the Asia–Pacific region where people might be settled. If northern Australia is identified as an area for settlement, discuss what additional information would be needed to decide whether millions of people could settle there.

In small groups, students could locate information about arable soil and water. In small groups and structured interviews, students could discuss the possible environmental impact and whether Australia *should* settle perhaps two million people. This could provide an opportunity for students who have not already demonstrated PS 6.1 or PS 6.4 to do so.

### **Activity 15 A view into the future**

#### **Resource 12**

Students review their work by completing Resource 12 and creating a collage depicting future scenarios for the Asia–Pacific region in 50 years. These scenarios should include possible, probable and preferred alternatives. The collage can be used to demonstrate many of the learning outcomes of this module.

## What is a region?

## Resource 1

1. There are no right or wrong answers here. Explore your understanding of the term ‘region’ by ticking which of the following you consider to be a region and then comparing your responses with someone else. If you are uncertain of what is being referred to, place a ‘?’ in the box.

Cairns	<input type="checkbox"/>
Thursday Island	<input type="checkbox"/>
The Darling Downs	<input type="checkbox"/>
Cape York	<input type="checkbox"/>
The Pacific Rim	<input type="checkbox"/>
Western Queensland	<input type="checkbox"/>
The Solomon Islands	<input type="checkbox"/>
South-East Asia	<input type="checkbox"/>
The brigalow country	<input type="checkbox"/>
The western suburbs of Brisbane	<input type="checkbox"/>
The Central Desert	<input type="checkbox"/>
Asia	<input type="checkbox"/>
The area within one square kilometre of where you live	<input type="checkbox"/>
Queensland	<input type="checkbox"/>

2. Complete the table below by describing the characteristics of the region you live in:

altitude	
Aboriginal language group	
state boundaries	
local river system	
local topographical features	
local cities	
important industries	
vegetation features	
population density (number of people per square kilometre)	

**What is the Asia–Pacific region?****Resource 2**

<b>Materials</b>	atlas blank outline map of Asia–Pacific region
<b>Instructions</b>	Complete the table below by adding the symbols used in the atlas to identify the listed features.

Description	Symbol
Capital city	
Cities with a population of over 1 000 000	
Cities with a population of 500 000 to 1 000 000	
Cities with a population of 100 000 to 500 000	
Cities with a population of 50 000 to 100 000	
Cities with a population of < 50 000	
Land between 500 and 1 000 metres in elevation	

<b>Instructions</b>	Use the map legend to identify the symbol used to represent a capital city and then: a. find and list the capital cities of the following countries b. locate the longitude and latitude of these cities.
---------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Some countries of the Asia–Pacific region	Capital	Longitude	Latitude
Australia			
China			
Cook Islands			
East Timor			
Fiji			
Indonesia			
Japan			
Kiribati			
Malaysia			
Maldives			
Marshall Islands			
Micronesia			
New Caledonia			
New Zealand			
Papua New Guinea			
Philippines			
Solomon Islands			
Vanuatu			
<i>Insert additional country of your choice</i>			



## Who’s in and who’s out?

## Resource 3

<b>Instructions</b>	Discuss in the space provided whether the countries included in the table belong to the Asia–Pacific region. Describe the criteria you applied in arriving at your decision.
---------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Country	Reasons for inclusion in the Asia–Pacific region	Reasons for omitting from the Asia–Pacific region
Australia		
Canada		
Chile		
China		
Fiji		
Kiribati		
New Zealand		
Russia		
Thailand		
USA		

**The plates are moving!****Resource 4**

<b>Core learning outcomes</b>	PS 6.4 SRP 6.1
<b>Materials</b>	Maps of tectonic plates and volcanic activity from various websites and textbooks e.g. maps of active volcanoes, plate tectonics and the 'Ring of Fire'.
<b>Instructions</b>	Use the map and atlas to investigate the following questions.

**Task A**

1. Are there any volcanoes in Indonesia, Malaysia, Japan and the Philippines?
2. On which tectonic plates is the Asia–Pacific region situated?
3. Which landform features are found along the margins of these plates?
4. What evidence can you find that would support the idea that the Asia–Pacific region should be included in 'The Ring of Volcanic Fire' said to circle the Pacific Ocean?
5. What do you think might attract people to settle in areas of tectonic activity?
6. What structures and services may need to be put into place to increase the safety of people living in these areas?
7. Where is Australia located in relation to tectonic plate interfaces and how does this relate to the continent's relative geological stability?

**Task B**

Use the think/pair/share strategy to answer the following questions:

1. Is any new land being created in the Asia–Pacific region?
2. What may eventually happen to the South Island of New Zealand given its location on two plates?
3. Are there other places where this could occur in the Asia–Pacific region?
4. The Australian continent is moving North at the rate of seven centimetres per year. If this continues at the same rate, how much further North could your home be in a million years?
5. What problems do people face if they live in areas where volcanic activity occurs regularly and how have governments responded to such problems?
6. What are the relationships, if any, between volcanic activity and the mining of minerals like nickel and zinc in countries such as New Caledonia?

**Task C**

1. Describe how your hypothesis has developed.
2. Develop another hypothesis that describes a relationship between global economic and ecological systems and then use some information you have found to test this hypothesis. (SRP 6.1)
3. Use a map and a table containing some statistical data to make a prediction about the impact of some change that is occurring in the Asia–Pacific region. (PS 6.4)

**Assessment item 1 — Field study****Resource 5**

**Field study report**  
**Managing a local environment**

**Conditions**

Word length: 800–1 000 words

**Tasks**

Your main task is to create a management plan that describes how changes likely to impact on local vegetation should be managed. Your report must use your field study notes to support its conclusions.

1. Once you are at the selected site, with assistance from your teacher, use the aesthetic perception rating chart to begin your observations. View the environment as a resource and assess its relative social, economic and environmental values.
2. Have a closer look: describe the geographic features of the area, particularly the natural and cultural factors that influence its vegetation communities. The field study notes you make should include maps, tables and statistical data (PS 6.4) and possibly photographs.
3. Assumptions about how changes are impacting on local vegetation can be challenged when you are in the field. Be prepared to respond to these challenges and collect new data.
4. Make predictions about the impact any proposed developments would have on the natural vegetation and justify your predictions by referring to the landscape around you.
5. Identify prospective stakeholders in the area and their probable and preferred management plans.
6. Reconsider the social, economic and environmental value of the site by completing the tasks in the management plan analysis device.
7. Use the management plan analysis device and your field study notes to devise a draft management plan for the site.
8. Think about your management plan and check whether it emphasises environmental factors more than economic factors. Add social factors and the aesthetic needs of people to your management plan.
9. Investigate whether management plans are already in place. Check with local and state government departments. Compare these plans with the one you have started to draft.
10. Make adjustments and redraft your plan. Submit your final report and all your preparation notes.

<b>Core learning outcomes</b>	Working towards demonstrating the Level 6 learning outcomes	Demonstrating the Level 6 learning outcomes	Demonstrating Level 6 learning outcomes and working towards Beyond Level 6 learning outcomes
PS 6.1 Students use criteria and geographical skills to develop conclusions about the management of a place. – demonstrated by your final report			
PS 6.3 Students initiate and undertake an environmental action research project based on fieldwork. – demonstrated by your fieldwork notes and the initiative you showed responding to issues as they emerged			
PS 6.4 Students use maps, tables and statistical data to express predictions about the impact of change on environments. – demonstrated by the final report and your fieldwork notes			

**Assessment item 1 (continued)**

**Resource 5**

**Aesthetic perception rating chart**

Rate each characteristic as follows:

-2	no longer present because of human activity
-1	altered because of human activity
0	never present so not applicable
1	attractive and relatively unaltered occurrence
2	extremely beautiful occurrence, unaltered by humans

Characteristic	Rating
view	
landforms and rock formations	
clear water	
vegetation	
flowering plants	
bird population	
animal life	
insect life	
amount of light and shade	
quietness and remoteness from other people	
freedom from ugliness or litter	
fresh air	

The environment which is the subject of this field study is a natural resource which contributes to the social, economic and environmental capital accessible to people in the region. List the ways in which this environment contributes to each of these three areas.

**Environmental**

•	•
•	•
•	•

**Social**

•	•
•	•
•	•

**Economic**

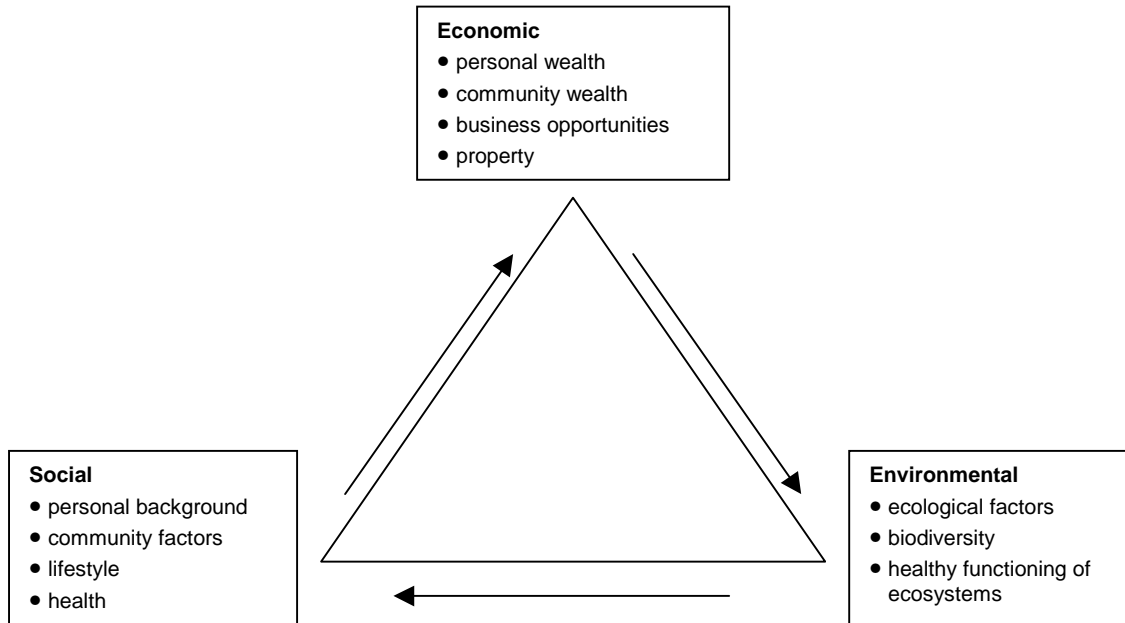
•	•
•	•
•	•

**Assessment item 1 (continued)**

**Resource 5**

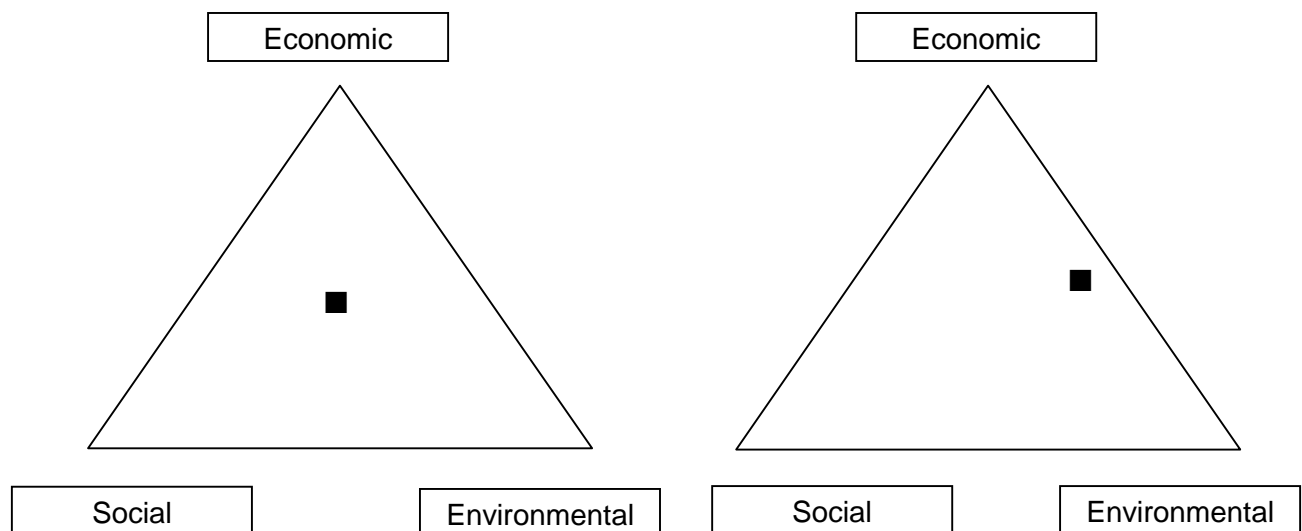
**Management plan analysis device**

The sustainable management of natural resources often involves balancing the environmental, social and economic factors when making decisions. This is sometimes represented as a triangle (see below).



When a decision on natural resource management has been made, summarise the factors considered and the weighting applied to each by placing a spot on your triangle diagram.

The left-hand triangle below shows that economic, social and environmental factors were considered equally important in making this decision. In the right-hand diagram, it can be seen that environmental and economic factors were considered to be far more important than social factors when making this decision.



Place a spot on the first triangle to illustrate the most important considerations for you at this stage of your draft management plan. Justify your placement to another person. Consider how your draft plan would have been different if you had placed a different emphasis on other factors (i.e. if you had different values).

If there is time, complete a class summary. On a whiteboard or overhead transparency, draw a triangle as above and have each person or group representative place a spot on it. Consider how much variation there is in the values of your class.

## What grows where?

## Resource 6

### Tasks

1. Select a site in the Asia–Pacific region for which you can obtain the data listed in the table below. Identify the relationships between types of vegetation and:
  - latitude
  - height above sea level
  - average annual rainfall
  - average summer temperature
  - average winter temperature.
2. Write a hypothesis that links vegetation types with these variables.
3. Test this hypothesis by gathering information about another site and describing any other factors that seem to affect vegetation communities.
4. Record your findings on a table like the one below then locate information for other sites.

Site	Vegetation type	Latitude	Height above sea level	Average annual rainfall	Average summer temperature	Average winter temperature	Hypothesis
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							

## Global warming and Pacific Island countries

## Resource 7

<b>Core learning outcomes</b>	PS 6.1 PS 6.4 SRP 6.1
<b>Materials</b>	Website article: Impacts of Climate Change on Pacific Island countries.
<b>Instructions</b>	Read the article and complete the tasks below. The aim is to comprehend some basic information before using it to demonstrate the core learning outcomes. Read the detail of these outcomes to identify how demonstrating them will require more than comprehension.

1. Name some gases that contribute to the greenhouse effect.
2. List some activities in countries like Australia that create greenhouse gases.
3. Describe some climatic changes that result from greenhouse gases produced by humans.
4. Name some Pacific Island countries that are most vulnerable to the impact of climate and sea level changes.
5. Prepare a table like the one below which summarises the impacts climate change has on Pacific Island countries.

Element	Impact
Temperature	
Sea level rise	
Tropical cyclones	
Coastal zones	
Water resources	
Agriculture	
Human health	
Heritage sites	
Fisheries	
Forestry	
Housing	

6. Summarise the overall social and economic impacts of climate changes on Pacific Island countries.

## Greenhouse gas emissions — seeking solutions

## Resource 8

<b>Core learning outcomes</b>	Completing this task will help you to demonstrate at least PS 6.2 and SRP 6.3, but you may be able to construct ways that the information in the completed table could be used to demonstrate other learning outcomes.
<b>Materials</b>	Earlier notes you may have taken and materials provided by your teacher.
<b>Instructions</b>	Read the vertical and horizontal columns carefully and, using the completed cells as a guide, devise options for reducing the production of greenhouse gases in industrialised countries.

### Options for reducing the production of greenhouse gases

	<b>Power generation</b>	<b>Power distribution</b>	<b>Power consumption</b>	<b>Ground transport</b>	<b>Forest</b>
<b>Pricing/tax</b>	<ul style="list-style-type: none"> <li>• carbon tax on all fossil fuels</li> <li>• tax on ageing and inefficient generators</li> <li>• preferential tax/exemptions for non-fossil consuming technologies</li> </ul>	<ul style="list-style-type: none"> <li>• preferential tax/exemptions for suppliers that upgrade the distribution system networks</li> </ul>			<ul style="list-style-type: none"> <li>• make expenses involved in establishing forests tax deductible</li> <li>• sell emission offset rights</li> </ul>
<b>Subsidy</b>		<ul style="list-style-type: none"> <li>• subsidies for upgrading power distribution networks</li> </ul>			
<b>Regulation/policy</b>			<ul style="list-style-type: none"> <li>• minimum equipment standards</li> </ul>		
<b>Information</b>					
<b>Equipment supply</b>	<ul style="list-style-type: none"> <li>• control emissions and monitor instruments</li> <li>• more efficient power generators</li> <li>• power from wind, hydro, biomass, tidal and solar sources</li> </ul>			<ul style="list-style-type: none"> <li>• fuel consumption labelling schemes</li> <li>• public education and maintenance training programs</li> </ul>	
<b>Institutional</b>	<ul style="list-style-type: none"> <li>• commercially oriented power sector</li> </ul>				<ul style="list-style-type: none"> <li>• nurseries</li> </ul>



**Possible assessment item**

**Resource 9**

**Advocacy proposal with multimedia presentation  
Turning the gas down**

**Tasks**

1. Create a proposal to be communicated to an audience of your choice. The audience must be in a position to influence Australia’s greenhouse gas production. This could mean that it includes a parliamentary or local government representative, a representative from industry or a member of an environmental lobby group. Identify the audience, locate contact details and write an invitation. It must be approved and sent by your teacher.
2. In groups of approximately six to ten, organise and promote the presentation. To do this, notice that you are applying knowledge you have gained from earlier activities and possibly earlier units and other key learning areas. As a minimum, you should have completed Resources 7 and 8.
3. Prepare for the event by creating multimedia elements (such as computer documents or OHT slides) for your presentation. The presentation should last approximately ten minutes. Each group member should present a section of the presentation. All preparation work, including correspondence, must be submitted after the presentation and contributions by individuals should be noted. Each group member should also hand in this sheet with comments in the appropriate column of the table. Your teacher will make the final decision about whether you have demonstrated this learning outcome.

<b>Core learning outcome: SRP 6.3</b>	Working towards demonstrating the Level 6 learning outcomes	Demonstrating the Level 6 learning outcomes	Demonstrating Level 6 learning outcomes and working towards Beyond Level 6 learning outcomes
Students advocate to influence Australia's role in future global economies or environments.			

## Regional population growth

## Resource 10

Country	Population mid-1999 (millions)	Ratio of Australia's population compared with selected country's population	Population growth per annum (%)	Anticipated population in _____
China				
Cook Islands				
Fiji				
Indonesia				
Japan				
Kiribati				
Malaysia				
Maldives				
Marshall Islands				
Micronesia				
New Zealand				
Papua New Guinea				
Philippines				
Australia				

## Asia–Pacific issues: creating solutions

## Resource 11

Student name: \_\_\_\_\_

**Small-group reports**

For self- and peer assessment of core learning outcomes PS 6.2, SRP 6.1 and SRP 6.3.

**Prerequisites**

You have already completed some exercises involving demographic data, made some predictions and created and tested some hypotheses. You may have already demonstrated SRP 6.1. In earlier modules, you have completed reports.

**Tasks**

- Form groups of three to four students.
- Use the data you have used before and create a hypothesis about how an economic environment in a Pacific Island country or region has influenced, been influenced by or been interdependent with:
  - a global economic environment — for example, tourism patterns that reflect global income levels
  - a global ecological environment — for example, changing climate patterns.

This will require some discussion and sharing of ideas. Remember that population characteristics influence the economy and that population distribution and density influence natural environments. Appoint one person as note-taker.
- Using resources provided, the library and/or the Internet, locate information suited to testing the hypothesis created in task 2. You will never have complete information, but when you think you have sufficient to make a tentative decision about the hypothesis, summarise that decision. Your summary could be presented in note form and/or in drawings that you could use to help you give an oral presentation or it could be in a written report.
- Use what you have already found out to briefly describe what you think is likely to be a major Asia–Pacific environmental issue in future.
- Create a proposal involving actions by Australians (governments, companies, community groups and/or individuals) that could help resolve the issue you described in task 4.
- Consider how you might advocate to support the actions you described in task 5. For example, you could write a letter to a newsgroup or newspaper, work with younger students to raise their awareness, make inquiries with a government or non-government agency about how you might be able to do something, write a letter to your local federal member of parliament or phone a talk-back radio show. Share your ideas for advocacy with your teacher and, when approved, engage in that advocacy. This is likely to involve homework.
- Read the core learning outcomes and consider how you may have already demonstrated these three learning outcomes. Meet in your small group and take it in turns to describe how you have or have not demonstrated the learning outcomes. Your description could be mainly verbal or mainly in writing. After each person has described how they have or have not demonstrated the learning outcome, other group members record the initials of that person in one of the three columns. There does not have to be agreement, but discuss your decisions before recording a result. If necessary, make some notes on a separate sheet of paper that explain your decision. Use a pencil because you may want to make changes later. If you consider the learning outcome has been demonstrated extremely well, pencil the group member's initials in the 'Working towards demonstrating the Level 6 learning outcomes' column. Your teacher will use this information to make the final decision. Once the demonstrations of all three learning outcomes have been assessed, look over them again and decide if you want to change any.
- Submit your preparation work and this sheet to your teacher.

Core learning outcomes	Working towards demonstrating the Level 6 learning outcomes	Demonstrating the Level 6 learning outcomes	Demonstrating Level 6 learning outcomes and working towards Beyond Level 6 learning outcomes
PS 6.2 Students create proposals to resolve environmental issues in the Asia–Pacific region.			
SRP 6.1 Students develop and test a hypothesis concerning a relationship between global economic and ecological systems.			
SRP 6.3 Students advocate to influence Australia's role in future global economies or environments.			

**Futures grid**

**Resource 12**

	This week	Next week	Next month	Three months' time	Six months' time	One year's time	My lifetime
The world							
The Asia–Pacific region							
My country							
My locality							
My school							
My family							

**Key questions in geographical inquiry****Resource 13**

Key questions in geographical inquiry	Associated skills/processes	SOSE phases of social and environmental inquiry
What and where are the issues or patterns being studied?	observation (direct and indirect) recording description	framing and focusing questions
How and why are they there?	comprehension validation	locating, organising and analysing evidence
What are their impacts or consequences?	application analysis synthesis	evaluating, synthesising and reporting conclusions
What can be done to improve the situation?	evaluation decision making communicating findings action where appropriate	

Source: 'Geography in Years 1 to 10 SOSE', available on the Queensland School Curriculum Council website.

## Support materials and references

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### Community

Publications available for loan and contacts for guest speakers: Global Learning Centre, 102 McDonald Road, Windsor Q 4030. Telephone: (07) 3857 6666 Fax: (07) 3857 2173 email: glc@mailbox.uq.edu.au.

### CD-ROM

St Hilda's School, *Bright Sparks*, 52 High St, Southport, Q 4215.

### Websites

(All websites listed were accessed in March 2002.)

About Geography. [www.geography.about.com/cs/blankoutlinemaps/](http://www.geography.about.com/cs/blankoutlinemaps/)  
Includes blank outline maps.

Asia–Pacific Forestry Commission. [www.apfcweb.org/](http://www.apfcweb.org/)

Atlases — some publishers include:  
Jacaranda-Wiley. [www.johnwiley.com.au/school/jacatlases/](http://www.johnwiley.com.au/school/jacatlases/)  
Heinemann. [www.hi.com.au](http://www.hi.com.au)

Austrade, *Information on overseas markets*. [www.austrade.gov.au/home/](http://www.austrade.gov.au/home/)  
A section supports searches by region.

Australian Rainforest Conservation Society. [www.rainforest.org.au/](http://www.rainforest.org.au/)  
Includes links to interest groups.

Central Intelligence Agency, *The World Factbook*.  
[www.odci.gov/cia/publications/factbook/index.html](http://www.odci.gov/cia/publications/factbook/index.html)  
Includes useful maps and country profiles.

Department of Natural Resources and Mines. [www.nrm.qld.gov.au/resourcenet/education/](http://www.nrm.qld.gov.au/resourcenet/education/)

Friends of the Earth Australia. [www.foe.org.au/](http://www.foe.org.au/)

National Association of Forest Industries (NAFI). [www.nafi.com.au/](http://www.nafi.com.au/)  
Advocates for the responsible exploitation of forest resources.

National Geographic, *Xpeditions*. [www.nationalgeographic.com/xpeditions](http://www.nationalgeographic.com/xpeditions)

Queensland School Curriculum Council. <http://www.qscc.qld.edu.au/>  
For research papers such as 'Geography in Years 1 to 10 SOSE'.

School of Geography and the Environment, University of Oxford. [www.geog.ox.ac.uk/](http://www.geog.ox.ac.uk/)

Virtual Fieldwork for Geographers. [www.georesources.co.uk/indexvf.htm](http://www.georesources.co.uk/indexvf.htm)  
Lots of photos and notes.

**This sourcebook module should be read in conjunction with the following Queensland School Curriculum Council materials:**

***Years 1 to 10 Studies of Society and Environment Syllabus***

***Years 1 to 10 Studies of Society and Environment Sourcebook Guidelines***

***Studies of Society and Environment Initial In-service Materials***

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