

12 SUSTAINABILITY

12.1 Vocabulary

referring back • introducing quotations/paraphrases

A Study the words in box a.

- 1 Use your dictionary to find out meanings.
- 2 What part of speech is each word?
- 3 Check the stress and pronunciation.

B Read text A on the opposite page.

- 1 What is a DPSIR analysis?
- 2 Look at the highlighted words. Connect each word to the noun or phrase it refers to.

Example:

its refers to the previously mentioned noun *country*

C Study the verbs in box b. They can be used to introduce quotations or paraphrases/summaries.

- 1 Check the meanings of any words you don't know.
- 2 Which verbs have similar meanings?
- 3 Which verbs are **not** followed by *that*?
- 4 When can you use each verb?

Example:

accept = the writer (reluctantly) thinks this idea from someone else is true

D Read text B on the opposite page. Look at the highlighted sentences.

- 1 What is the purpose of each sentence?

Example:

... both public and private organizations must be accountable for their actions. = opinion

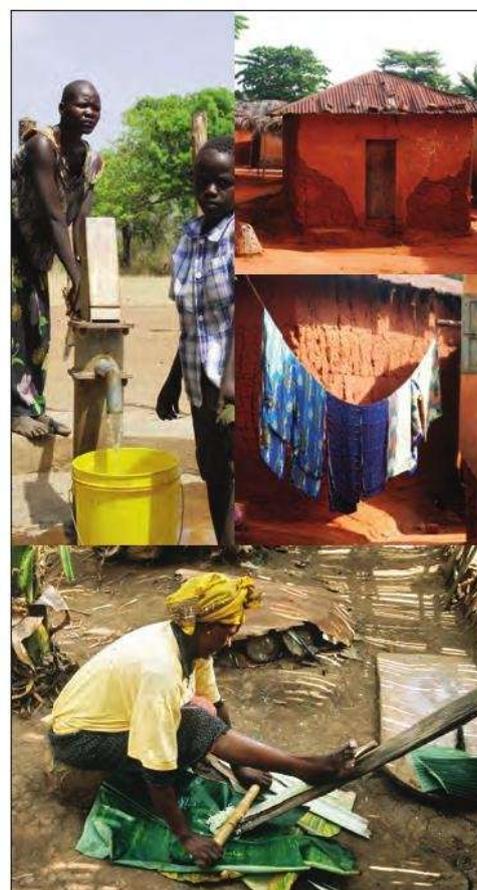
- 2 In an assignment, should you refer to the highlighted sentences by **quoting directly** or **paraphrasing**?
- 3 Choose an appropriate introductory verb and write out each sentence as a direct quotation or a paraphrase. Add the source references.

E Read the DPSIR report on the following page.

- 1 Use some of the words from box a to complete the DPSIR report.
- 2 Can you add further recommendations to the conclusion of the report?
- 3 Write a paragraph summarizing the report. Include one of your sentences from Exercise D, question 3.

a congestion consumption
degradation development
encroachment low-density
preservation replenish
resource stakeholder
sustainable

b accept agree argue
assert cite claim concede
consider contend describe
disagree dispute emphasize
illustrate indicate insist
note observe point out
report show state suggest



A sustainable village in southern Africa

A Driver-Pressure-State-Impact-Response Analysis

With global concerns for the environment growing, governments and intergovernmental bodies are trying to reduce the negative impact human settlements are having on the environment. When a country has a growing population or is developing its economy, it may need to expand or build new towns and industrial sites. However, in recent years, before countries do this, it has become common for them to predict and limit the environmental impact by preparing sustainability analysis reports. A commonly used technique for this is the internationally accepted Driver-Pressure-State-Impact-Response analysis (DPSIR) developed by the Organisation for Economic Co-operation and Development

(OECD). In this method, relevant organizations carry out an investigation in which they identify key threats to the local population and environment that new and existing development may have. Secondly, the DPSIR sets future objectives and targets which will ensure the well-being both of local stakeholders and of the environment. This means that the analysis should advance local understanding of sustainable development and improve the quality of life for everyone. The results of one such report summarizing the sustainability of human settlements in South Africa are presented below.

from Caporali, D. (2007). *Analyzing sustainability*. Hadford: Hadford University Press.

B Why Report?

^a When a company or town council is planning to make major infrastructure changes, local residents often react in negative ways. So these organizations need to reassure people that any change that does happen takes into consideration the interests of all stakeholders who want to integrate environmental and social information as well as economic information in the decision making process. An important point to make here is that ^b both public and private organizations must be accountable for their actions. ^c Adverse criticism of their environmental and social performance will

definitely put at risk the reputation of a well-regarded company or a political body. ^dAs the Earth Resources Institute (2003) asserts, it is highly likely in forthcoming years that 'organizations will need to report not only on their financial performance but also on the environmental and social implications of economic development'*. Only when the synergies between economic, social and environmental performance are recognized can we meet our future objectives to create a better future for all.

* Earth Resources Institute (2003). *Making our future sustainable*. *Earth Resources Institute Journal*, 4, 124-126

from Pickwell, M. (2006, p.24). *Introduction to sustainable futures*. Hadford: Hadford University Press.

DPSIR Sustainability Report Summary

Introduction

In order to develop a sustainable rural and urban renewal program, the Southern African Development Agency needs to develop a Human Settlement Plan to provide guidance for the development of _____ human settlements.

Method

The framework used for the sustainability analysis is based on the DPSIR. A number of key factors were analyzed based on a set of requirements drawn from international descriptions of the characteristics of a sustainable settlement. The factors include:

- the quality of life provided by the settlement
- the _____ of local flora and fauna
- the _____ of sustainable economic activity

Findings: Tensions and Threats

Some of the tensions involve:

- the difficulty of balancing social equity and economic efficiency
- the _____ of urban areas onto nature reserves

- a lack of public transport for those who have limited access to private cars

The most critical threats to the sustainability of settlements in South Africa include:

- lack of local water _____
- _____ of local ecosystems
- reduction in biodiversity
- unsustainable _____ of local fuel sources

Conclusions

The report's recommendations for a sustainable future focus on:

- increasing awareness of the relationship between human settlements and their biophysical environment among the local population
- intervening in the way our settlements function so as to prevent damage to the environment
- a concerted effort to manage local fuel and water resources more efficiently

12.2 Reading

linking ideas in a text • quoting and paraphrasing

- A** Discuss the following questions.
- 1 Consider the impact of your local community on the environment.
 - 2 Do you think the way we consume our planet's natural resources can continue in the same way forever?
- B** Survey the text on the opposite page. What will the text be about? Write three questions to which you would like answers.
- C** Read the text. Does it answer your questions?
- D** Number the sentences on the right 1–5 to show the order in which they happened.
- E** For each paragraph:
- 1 Identify the topic sentence.
 - 2 Think of a suitable title.
- F** Look at the underlined words in the text. What do they refer back to?
- G** Study the highlighted words and phrases.
- 1 What do they have in common?
 - 2 What linking words or phrases can you use to show:
 - addition?
 - contrast?
 - concession?
 - result?
 - reason?
 - 3 Write the sentences with the highlighted items again, using other linking words or phrases with similar meanings.
- H** Read the text on the right. A student has written about some of the characteristics of a sustainable community, but the quotations and paraphrases have not been correctly done. Can you spot the mistakes and correct them?
- I** Write a paragraph for a university lecturer, summarizing the key aspects of sustainability, according to Lindsay. Decide whether you should quote or paraphrase the material from the text.

	An important document was published that highlighted the decline in ecosystems.
	A new international declaration on forestry and biodiversity was initiated.
	A UN document was published highlighting the 'three pillars' of sustainable development.
	A new global strategy focusing on the sustainable model was adopted by the UN.
1	The UN had its first environmental conference.

As Lindsay (2008) explains that communities will need to work towards a responsible policy of reducing, recycling and re-using consumed goods. At present, the author suggests that the majority of household and commercial waste is placed in landfill sites, which is a great waste of resources and highly damaging for the environment (p. 36). In addition, residential areas should *'become more compact'* in the sense that more homes will be built on smaller plots of land. According to Lindsey, she says that this housing policy will enable land to revert to its original state and towns and cities not encroach on natural landscapes.

Sustainable communities

A development model for a better future?

By Cora Lindsay

Concern about the degradation of our natural environment has increased in recent decades. In 1972, the United Nations had its first international conference that made the environment a priority. A plan was put forward to develop global cooperation in environmental strategies and resource use. Then, in 1982, the International Union for Conservation of Nature published a ground-breaking document entitled the *World Charter for Nature*. It drew attention to the decline in the world's ecosystems and the rapid disappearance of clean water sources and forest ecosystems. **Therefore**, in the last decades of the 20th century, a new and more rational model for managing and using our planet's resources came to prominence among scientists and international organizations. By the end of the 1980s, confronted by the different priorities of the developed world and developing world, the UN decided that, to meet the needs of the poor and protect the environment, a new global environmental strategy had to be adopted. **This** became known as the sustainable development model.

The word *sustainability* means the ability of a system or organization to maintain a process or state indefinitely. In the context of development and ecology, it relates to the capacity of our present generation to meet its own needs without compromising the ability of future generations to meet their own requirements. **Hence**, for a community to be sustainable it must only use natural resources at a rate which can be replenished

naturally, and at the same time it should try to preserve the environment. This philosophy was further developed in the 1992 Rio *Declaration on Environment and Development* where agreements on forestry were made and the Convention on Biological Diversity was initiated.

However, sustainable development does not focus solely on environmental issues. The United Nations 2005 *World Summit on Sustainable Development* published an outcome document which stated that the concept of sustainability refers to three 'interdependent and mutually reinforcing pillars' which include economic and social development as well as environmental protection. The document went on to clarify this statement by suggesting that if we are to protect the environment and conserve resources then we must also help poorer nations develop their standards of living and focus less on material consumption and more on personal growth and social cohesion.

What would a sustainable community actually look like? On a very basic level, communities will need to become more aware of the impact that their consumption patterns have on other regions and ecosystems and work towards a responsible policy of reducing, recycling and re-using consumed goods. At present, most waste generated by private homes and factories ends up in municipal landfill sites. This is clearly an illogical squandering of resources and is having a negative impact on

the natural world. Land use patterns will have to be reassessed, in the sense that residential developments will have to become more compact. Low-density and spread-out residential estates will need to be phased out. **In addition**, more effort will be made to promote mixed land use where homes, jobs and shopping are all in close proximity to one another. **Consequently**, more land can be returned to its natural state and human settlements will not encroach on natural landscapes. Another aspect of a sustainable community is the move to a greener transport system where most movement will be on foot, bicycle or public transport, and the current heavy reliance on private cars will be reduced. **Moreover**, energy generation will be provided by wind or solar power, and natural open spaces will form an integral part of such communities. **These** will incorporate natural habitats rather than 'manicured' parklands that use chemical fertilizers and pesticides. **Furthermore**, in a sustainable community, non-toxic practices will be used when growing crops, and humane practices will be utilized when rearing livestock. Finally, farmland will be preserved for local food production, and soil and water protected for future generations.

To summarize, sustainable development is a far-reaching and flexible philosophy. It aims to promote a healthy natural environment while at the same time providing long-term economic security for everyone.

12.3 Extending skills

research reports: introduction, method, conclusion

- A** Study the words in the blue box.
- 1 Check the pronunciation and grammar.
 - 2 What are their meanings in a research report?
- B** Read the two *Method* paragraphs on the right.
- 1 Copy them into your notebook. Put the verbs in brackets in the correct form.
 - 2 Identify the original research questions, the research methods and other important information.
- C** What are the sections of a research report? What order should they go in?
- D** Read the *Introduction* and *Conclusion* to Report A on the opposite page.
- 1 Why was the report undertaken?
 - 2 What action(s) does the report recommend?
 - 3 What are the elements of a good introduction and conclusion?

conduct data discussion findings
implication interview interviewee
interviewer limitation method
questionnaire random recommendation
research question respondent results
sample survey undertake

Report A: Method

A written questionnaire (*design*) to identify the reasons why university staff and students do not use public transport and how new initiatives can be implemented to overcome these barriers and reduce the use of private vehicles. Two thousand questionnaires (*send*) to a random sample of staff and students who have parking permits, of which 150 (*return*). In addition, 130 people (*interview*) while leaving the university car park during one day in June. Fifty-two per cent of the whole sample (*be*) women.

Report B: Method

In order to find out the sustainable transport models of some local councils, a survey of their websites (*undertake*) during the first week of June. The councils which (*investigate*) included Newstead Town, Longleth and Bridgeford.

12.4 Extending skills

research reports: questionnaires, findings, discussion

- A** Describe the data in Figures 1 and 2 from Report A.
- B** Look at the first paragraph from the *Findings* section of the report.
- 1 Complete the spaces with quantity phrases. Put the verbs in the correct tense.
 - 2 Write another paragraph using Figure 2.
- C** Look at the notes for the *Discussion* part of the report on the opposite page. Write the discussion paragraph.
- D** Cover the *Conclusion* section on the opposite page.
- 1 What should the report writer say in the *Conclusion*? Make some notes.
 - 2 Read the *Conclusion* again and compare.

Report A: Findings

Firstly, when considering reasons why the respondents did not use public transport, _____ (80%) of staff and students (*say*) that the frequency of services was a key factor. Only _____ (10%) (*indicate*) that frequency of service had no impact on their decision to avoid public transport. Although 60% of the respondents thought that public transport was expensive, _____ (40%) said that price was not a factor. Finally, _____ the respondents (70%) (*consider*) that length of journey was an important reason for not using buses or trams.

Report A: Introduction

In the last ten years, Midland University, in conjunction with a leading UK-based sustainable transport charity, has been promoting a green public transport system for both staff and students which utilizes the town's current bus and tram services. However, because many people have continued to use private vehicles, it is important to know why these 'stakeholders' continue to avoid the public transport services provided. This report will describe a survey undertaken to find out people's current attitudes towards public transportation and sustainable transport initiatives. Recommendations will also be made as to how the university can increase the number of people using the public transport network when getting to and from the university campus.

Report A: Conclusion

To conclude, this survey has revealed some key weaknesses in the current bus and tram services that serve Midland University. It is clear that in order to improve services and to increase staff and students' uptake of both buses and trams, services must be improved in terms of length of journey time and frequency of services. If these issues are addressed, then Midland University can significantly reduce private vehicle use and consequently reduce its carbon footprint in the future. In addition, the use of more sustainable forms of transport such as car-sharing and cycling should be encouraged. If no action is taken the problems of congestion and pollution will only continue to increase.

Report A

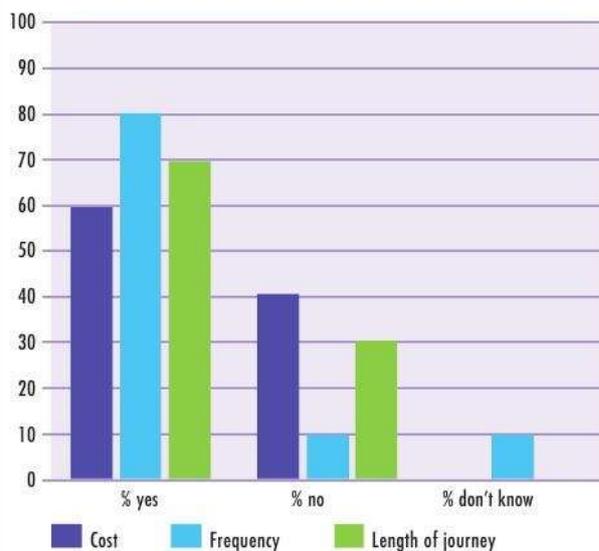


Figure 1: Factors preventing staff and students using public transport

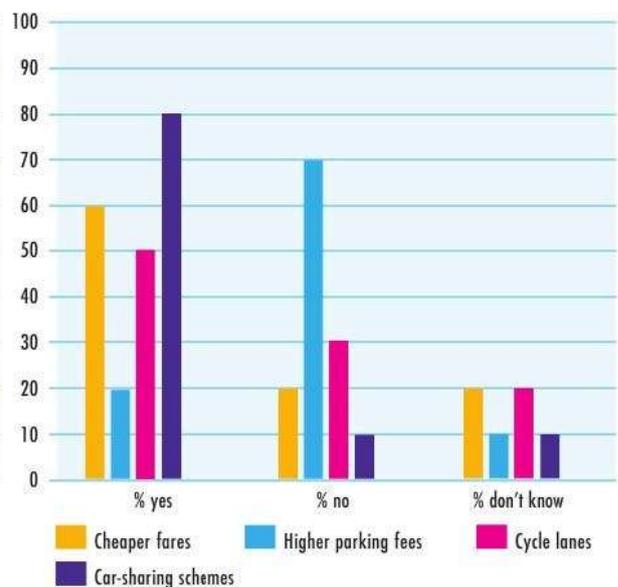


Figure 2: Possible initiatives to encourage sustainable transport use

Main factors for staff and students not using public transport → length of journey and frequency of service.

Incentives that could ↑ passenger numbers on public transport:

- car-sharing schemes & cycle lanes
- ? cheaper fares

Incentives disliked by respondents:

- higher parking fees

NB: Research limitation: 150 respondents from 2000 quest. = 7.5%

Vocabulary bank

Introductory verbs

Choosing the right introductory verb is important. Your choice of introductory verb shows what kind of statement the writer is making.

Example:

Pickwell (2006) argues that everyone should be involved in shaping a sustainable future.

Your choice of introductory verb also shows what you think of another writer's ideas. This is an important part of academic work.

Verb	The writer ...
<i>agree</i>	thinks this idea from someone else is true
<i>accept, concede</i>	reluctantly thinks this idea from someone else is true
<i>consider, emphasize, note, observe, point out, state, suggest*</i>	is giving his/her opinion
<i>argue, assert, claim, contend, insist</i>	is giving an opinion that others may not agree with
<i>cite</i>	is referring to someone else's ideas
<i>disagree, dispute</i>	thinks an idea is wrong
<i>suggest*</i>	is giving his/her recommendation
<i>describe</i>	is giving a definition/description
<i>illustrate, indicate, show</i>	is explaining, possibly with an example
<i>report</i>	is giving research findings

**suggest* can have two meanings

Linking ideas in a text

Linking words, which join ideas within a sentence or between sentences, convey different meanings.

	Within sentences	Between sentences
Contrast	<i>but, whereas, while</i>	<i>However, In/By contrast, On the other hand</i>
Concession	<i>although, despite/in spite of the fact that</i>	<i>However, At the same time, Nevertheless, Despite/In spite of + noun, Yet</i>
Result	<i>so, so that</i>	<i>So, As a result, Consequently, Therefore</i>
Reason	<i>because, since, as</i>	<i>Because of + noun, Owing to + noun, Due to + noun</i>

Referring to quantities and group sizes in a report

A/An	<i>overwhelming/large/significant slight/small/insignificant/tiny</i>	<i>majority</i>	(of + noun)
		<i>minority</i>	
		<i>number</i>	
Over	<i>half</i>		
More	<i>than</i>	<i>a quarter</i>	
Less		<i>a third</i>	
		<i>x %</i>	

Skills bank

Structuring a research report

A research report is an account of some research which has been undertaken to find out about a situation or a phenomenon, e.g., *What do users of public transport think of our services? In what ways are local governments promoting sustainable transport systems?*

- Introduction introduce topic; background information; reasons for research
- Method research questions; how research was carried out
- Findings/results answers to research questions
- Discussion issues arising from findings; limitations of research
- Conclusion summary of main findings; implications; recommendations; possibilities for further research

Writing introductions and conclusions**Introduction**

- Introduce the topic of the report.
- Say why the topic is important.
- Give background information.
- Give an outline of the report plan.

Note: No substantial information; this belongs in the body of the report.

Conclusion

- Summarize the main points in the report without repeating unnecessarily.
- Make some concluding comments such as likely implications or recommendations.

Note: No new information; all the main points should be in the body of the report.

Deciding when to quote and when to paraphrase

When referring to sources, you will need to decide whether to quote directly or to paraphrase/summarize.

- **Quote** when the writer's words are special or show a particularly clever use of language. This is often the case with strongly stated *definitions* or *opinions*.
- **Paraphrase/summarize** descriptions and factual information.

Incorporating quotations

- Use an introductory verb.
- Don't forget the quotation marks.
- Make the quote fit the grammar of the sentence.
- Show any missing words with '...'.
• Copy the original words exactly.
- Add emphasis with italics and write [emphasis added].
- Add words which are not in the original but are necessary to fully understand the quotation out of context. Put the extra word(s) in brackets.

Do not quote more than one sentence **within the body** of a paragraph.

If you want to quote two or three sentences, put a colon and write the quote as indented text, so that it clearly stands out from the body of your essay.

However, think very carefully before you include a long quote. It is usually better to paraphrase in this case.