

91243R



NEW ZEALAND QUALIFICATIONS AUTHORITY
MANA TOHU MĀTAURANGA O AOTEAROA

QUALIFY FOR THE FUTURE WORLD
KIA NOHO TAKATŪ KI TŌ ĀMUA AO!

Level 2 Geography, 2018

91243 Apply geography concepts and skills to demonstrate understanding of a given environment

2.00 p.m. Thursday 15 November 2018
Credits: Four

RESOURCE BOOKLET

Refer to this booklet to answer the questions for Geography 91243.

Check that this booklet has pages 2–12 in the correct order and that none of these pages is blank.

YOU MAY KEEP THIS BOOKLET AT THE END OF THE EXAMINATION.

Geographic concepts you may choose to use in your answer include:

Environments

May be natural and / or cultural. They have particular characteristics and features which can be the result of natural and / or cultural processes.

Perspectives

Ways of seeing the world that help explain differences in decisions about, responses to, and interactions with environments. Perspectives are bodies of thought, theories, or world views that shape people's values and have built up over time.

Processes

A sequence of actions, natural and / or cultural, that shape and change environments, places, and societies. Processes can have temporal or spatial variations. Some examples of geographic processes include erosion, migration, desertification, and globalisation.

Patterns

May be spatial (the arrangement of features on the earth's surface) or temporal (how characteristics differ over time in recognisable ways).

Interaction

Involves elements of an environment affecting each other and being linked together. Interaction incorporates movement, flows, connections, links, and interrelationships which work together and may be one- or two-way interactions. Landscapes are the visible outcome of interactions. Interaction can bring about environmental change.

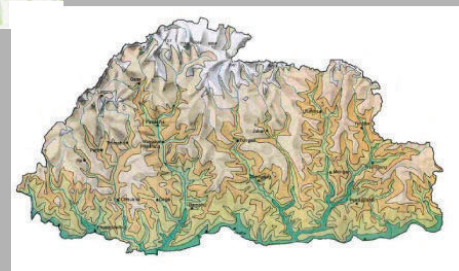
Change

Involves any alteration to the natural or cultural environment. Change can be spatial and / or temporal. Change is a normal process in both natural and cultural environments. It occurs at varying rates, at different times, and in different places.

Sustainability

Involves adopting ways of thinking and behaving that allow individuals, groups, and societies to meet their needs and aspirations without preventing future generations from meeting theirs. Sustainable interaction with the environment may be achieved by preventing, limiting, minimising, or correcting environmental damage to water, air, and soil, as well as considering ecosystems and problems related to waste, noise, and visual pollution.

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INTRODUCTION

Bhutan: A small but environmentally sustainable country

Bhutan is a landlocked country located in the Himalaya mountains between the two most populous countries, China and India. However Bhutan is small—it is 40 000 km² (about a quarter the size of New Zealand's South Island) and has a population of only 750 000 people.



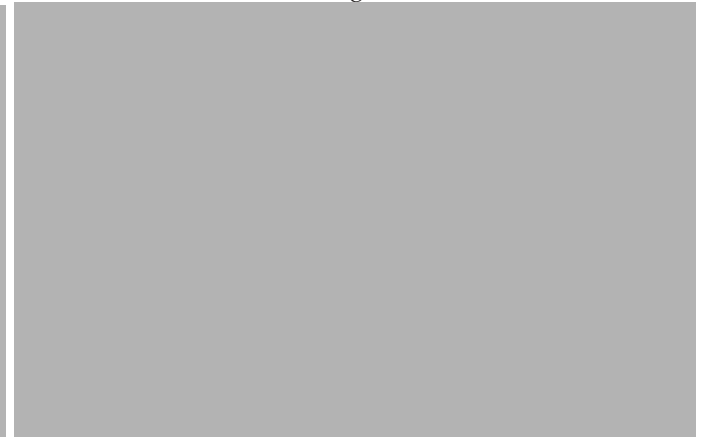
Bhutan's highest mountain, Gangkar Puensum



Approximately 80% of Bhutan's population works in agriculture



Farming and settlement are mainly confined to the river valleys



Paro Takstang Buddhist monastery

RESOURCE A: The Bhutan environment – Khuruthang village, Punakha

Figure 1: Satellite photograph of Khuruthang village and surrounds (the **X** marks the spot from which the photograph in Figure 2 was taken)



Figure 2: Photograph of Khuruthang village taken from point **X** in Figure 1



Figure 3: Map of Khuruthang Village showing locations of key features

Figure 4: Topographical map of the Punakha region (the red frame indicates the approximate location of Khuruthang Village and surrounds shown in Figure 1)



Figure 5: View of the Puna Tsanga Chu river valley, showing the location of Khuruthang Village, with the Himalaya mountains in the background

RESOURCE B: Monsoon wind processes affecting Bhutan's climate

Bhutan's climate has extremes of seasons. The summer monsoon winds blowing from the Bay of Bengal bring heavy rainfall between April and September, while the dry winter monsoon winds from the Tibet Desert bring a cold and dry winter season from October to April.

Figure 6: The hot and wet summer monsoon wind process

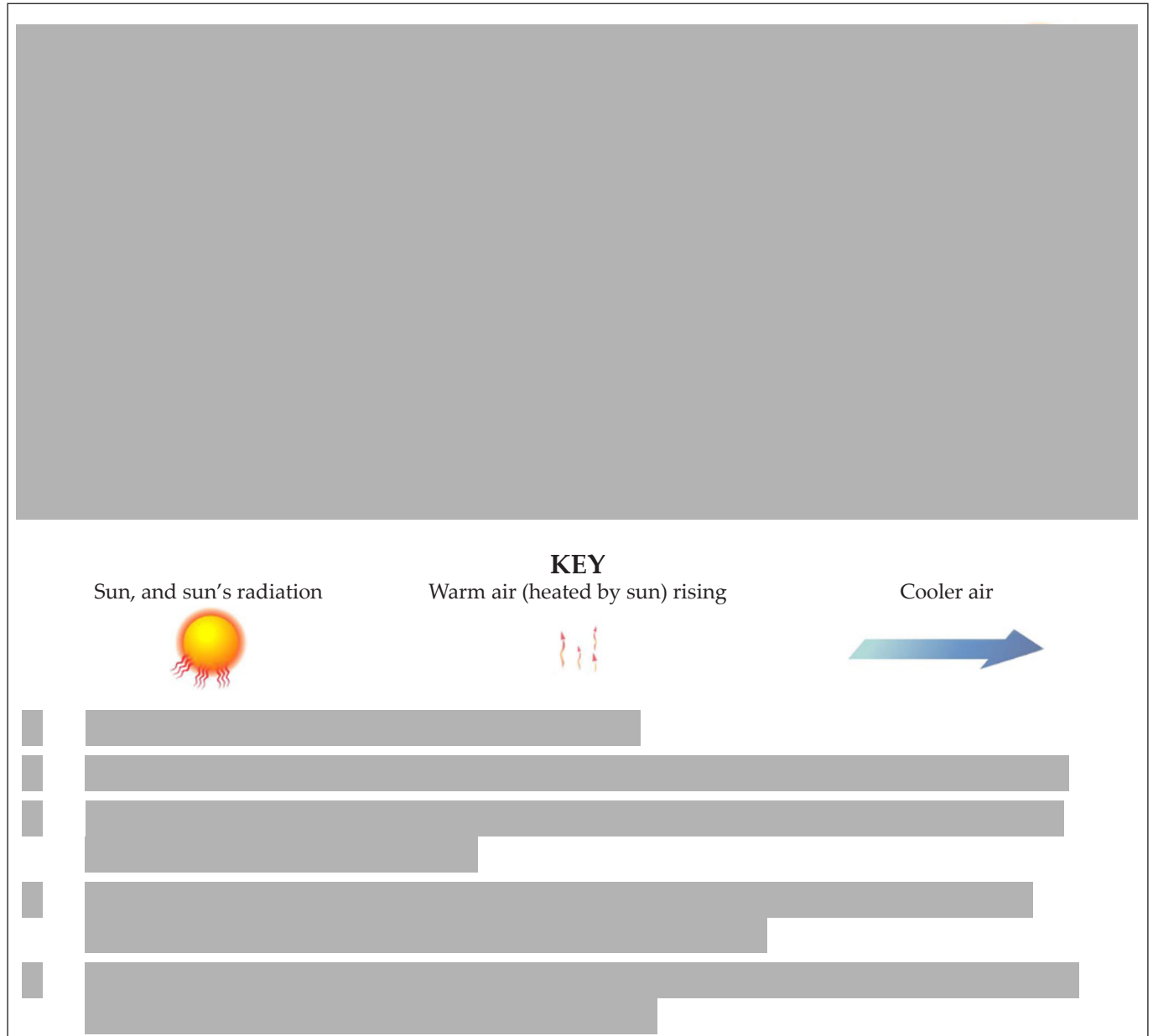
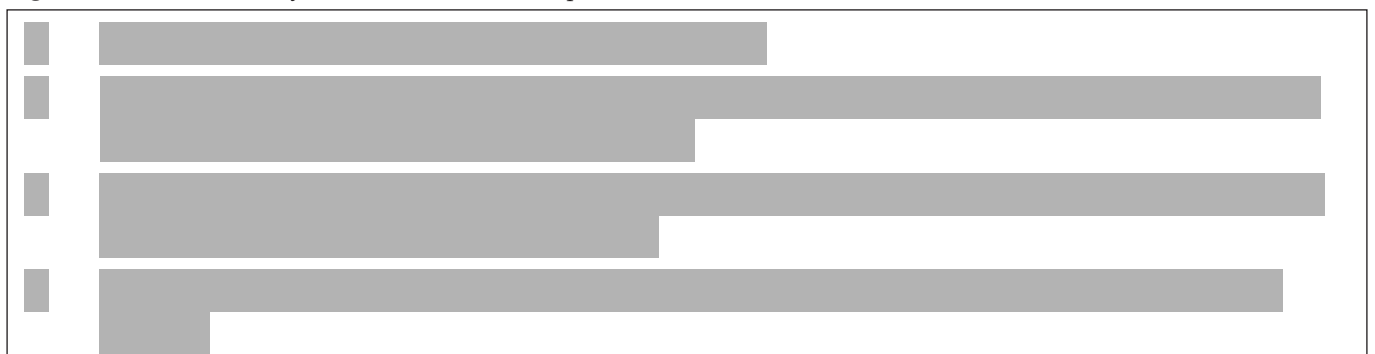


Figure 7: The cold and dry winter monsoon wind process



RESOURCE C: Climate, hydroelectricity production, and tourist numbers

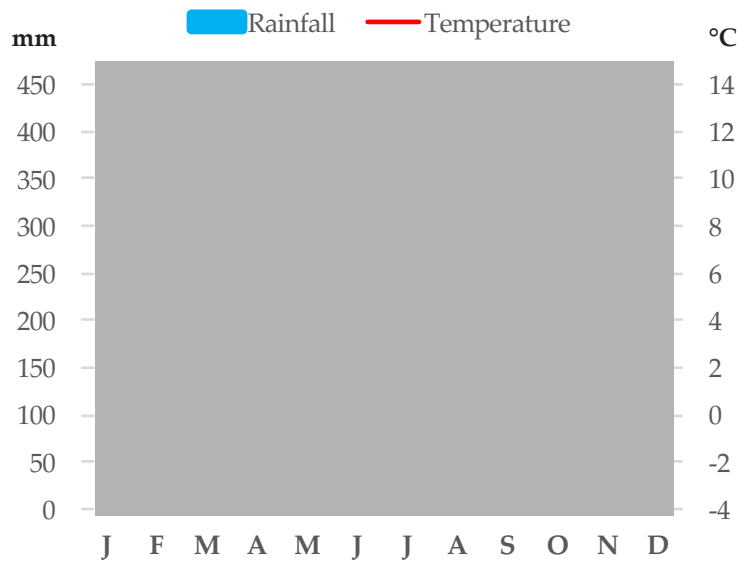


Figure 8: Average monthly rainfall and temperature in Bhutan's capital city, Thimphu



Figure 9: Bhutan's monthly hydroelectricity production as a percentage of annual production



Figure 10: Average monthly numbers of tourist arrivals in Bhutan

RESOURCE D: Bhutan's culture and economy

The benefits of Bhutan's unique culture

(Adapted from a TED Talk by Tshering Tobgay, Prime Minister of Bhutan, published on YouTube on 1 April 2016.)

Bhutan's predominant religion is Buddhism, and it is the only country where this is the official religion. In 1972, the King declared that happiness was more important than wealth. Today this philosophy is enshrined in the country's Constitution.

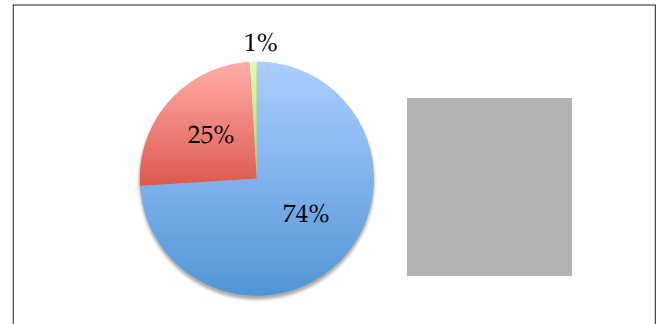


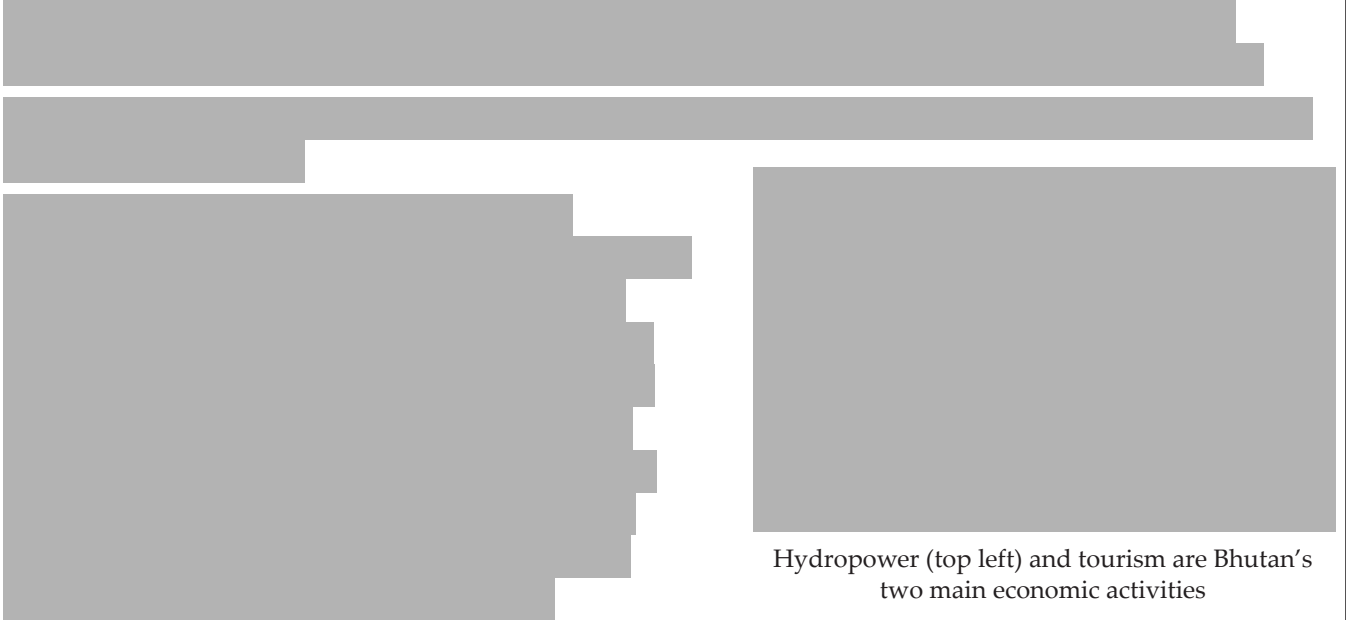
Figure 11: Approximate percentage of Bhutan's population by religious affiliation

We are not the wealthiest of people in terms of income or material wealth, but that is not our goal.

Bhutan's Prime Minister, Tshering Tobgay

Bhutan's Resources

Until the 1980s, Bhutan's mountainous terrain meant it was inaccessible and isolated from the rest of the world. This has proved an advantage in that it has enabled the government to avoid the poorly planned or haphazard development decisions made in other Asian countries, and today the country's natural resources remain largely intact. These include its extensive forests, its limited yet fertile and productive farmland, and its pristine water and air.



Hydropower (top left) and tourism are Bhutan's two main economic activities



There is a plan for all farming to be organic by 2020, with the abolition of all manufactured chemicals including environmentally harmful fertilizers and pesticides.

Acknowledgements

Material from the following sources has been adapted for use in this examination:

Page 2

Text: <http://seniorsecondary.tki.org.nz/Social-sciences/Geography/Key-concepts>

Page 4

Images (clockwise from top):

- <https://www.littlebhutan.com/wp-content/uploads/2013/06/Bhutan-Mountains.jpg>
- <http://primarktravelhouse.com/images/domestic-tour-packages/bhutan/famous-of-bhutan.jpg>
- http://www.fao.org/ag/AGp/agpc/doc/Counprof/Bhutan/Figure_2.jpg
- http://www.markandjim.com/wp-content/uploads/2015/06/IMG_6990_Fotor.jpg
- <https://www.globalsecurity.org/military/world/bhutan/images/map-bhutan-location1.jpg>

Page 5

Images (clockwise from top left):

- [https://en.wikipedia.org/wiki/Bhutan#/media/File:082_-_Gangkar_Puensum_-_7,570m_\(Dochula_pass\)_\(4677022812\).jpg](https://en.wikipedia.org/wiki/Bhutan#/media/File:082_-_Gangkar_Puensum_-_7,570m_(Dochula_pass)_(4677022812).jpg)
- <https://www.thethirdpole.net/en/2015/11/27/weather-fluctuations-wreak-havoc-on-bhutans-crops/>
- <http://www.kingtourist.com.vn/8-ngoi-den-linh-thieng-va-dep-nhat-tren-the-gioi.html>
- <http://www.seenepal.com/bhutan-info.html>

Pages 6 and 7

Figure 1: <https://earth.google.com/web/@27.54795045,89.87436963,1218.48963825a,2783.00203372d,35y,0h,0t,0r>

Figure 2: <http://m3.i.pbase.com/o2/93/329493/1/120469173.k79ZQbZY.Bhutan20092257.jpg>

Figure 3: <https://www.google.co.nz/maps/place/Khuruthang,+Bhutan/@27.551598,89.8667478,16z/data=!3m1!4b1!4m5!3m4!1s0x39e1dd604ae3d2e3:0xacad1a00b3ec4d25!8m2!3d27.5517264!4d89.8709748>

Figure 4: http://www.geomapa.nl/Samples/011_Bhutan_enlarged.jpg

Figure 5: <https://earth.google.com/web/@27.57499734,89.8838572,1663.14605926a,10302.99843612d,35y,0.13736921h,75.50113605t,0r>

Page 8

Figure 6: http://civic-exchange.org/materials/event/files/20150619%20Monsoon/150622_PPT_PeterClift.pdf

Page 9

Figure 8: <https://en.climate-data.org/location/5977/>

Images (top to bottom):

- http://68.media.tumblr.com/3b15fdb23d9dfe9c2cf790dfc0a0dfee/tumblr_inline_oc9wk54Gii1tp34yj_1280.jpg
- images.jagran.com/hydroplan-B-07-06.jpg
- <https://asia.nikkei.com/Economy/Bhutan-weighs-value-of-tourist-income-against-disruption>

Page 10

Text and still image: https://youtu.be/7Lc_dIVrg5M

Figure 11: <http://media1.britannica.com/eb-media/36/183936-004-0DDDC384.jpg>

Page 11

Text: <http://blogs.worldbank.org/developmenttalk/bhutan-development-economics-himalayas>

Images (clockwise from top left):

- <https://sandrp.files.wordpress.com/2014/02/kurichhu.png>
- <https://3.bp.blogspot.com/-286NAQx7Tnw/V00QHRTcuJl/AAAAAAAAAkc/YNIgq92as6gygmz51VAbKWG7fzZA8aQrgCKgB/s1600/Bhutan%2Byak%2Band%2BTreks.JPG>
- http://www.kingdomofbhutan.com/travel/individual_photo1.jpg