




QUESTION THREE: FISHING AND THE CHATHAM RISE

The resources below show the sea floor and ocean currents that circulate off the east coast of New Zealand, and a satellite image of a phytoplankton bloom in 2010 taken by a NASA satellite over the Chatham Islands and Rise.

Source: NASA Aqua satellite 5 December 2010.
<https://earthobservatory.nasa.gov/images/47621/bloom-around-the-chatham-islands-new-zealand>

Key

Depth below the sea surface	Colour
500 m	
2000 m	
5000 m	

Adapted from: <https://www.niwa.co.nz/our-science/oceans/bathymetry/download-the-data> and <https://teara.govt.nz/en/map/5912/ocean-currents-around-new-zealand>

The Chatham Rise is an underwater mountain range that extends from the east coast of the South Island to beyond the Chatham Islands. It is the meeting point of surface and deep-water ocean currents.

Explain how this region of the ocean will have an influence on marine life and human activity. In your answer you should consider:

- current formation and origin
- reasons for the different temperatures of the currents
- the reason why the two currents meet at the Chatham Rise.

You may use an annotated diagram to assist your answer.
