

Cyclone Fani (2019)

Assessment



Time: 45 minutes

Resources

- Assessment booklet (this booklet)
- A4 colour resource booklet
- Pen

Instructions

- Make sure you have all of the resources needed.
- Write your name, class, and today's date below.
- Answer only in this booklet, using the resource booklet when instructed.
- Make sure you check your Spelling, Punctuation, and Grammar (SPaG).
- Attempt all questions.
- Marks available for each question are shown in brackets.
- Do not open either this booklet or the resource booklet until told to do so.

Section		
A		/7
B		/6
C		/15
D		/17
Total		/45

Name |

Date |

Class |

Section A

A disturbance has been detected in the Indian Ocean over the weekend of 27 -28 April 2019. **Tropical thunderstorms** have begun to organise into a **cyclone**.

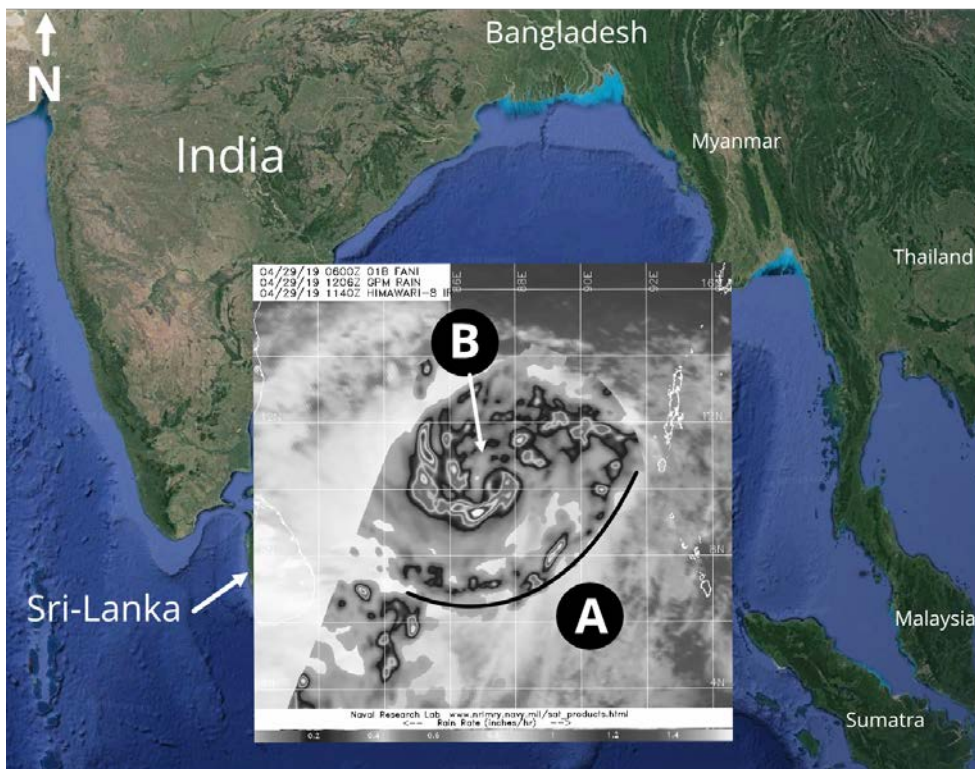
1. For a tropical cyclone to form, **what** is the lowest sea -surface temperature required? (1)

2. **What** do we mean when we say thunderstorms have ‘organised’ into a cyclone? (2)

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.....

The Indian Government’s **Metrological Department** had already flagged the disturbance as likely to develop into a tropical cyclone and satellite imagery provided by NOAA (USA) now shows the structure of the storm (Fig 1.).



3. What is the arc -shaped feature of the storm labelled **A**? (1)

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4. What is the weather like at the position indicated by **B**? (1)

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5. Which direction do you think the tropical storm is moving , and why? (2)

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The tropical cyclone is given a name – **Fani** (pronounced Fawni in English). Meteorological organisations around the world begin forecasting its track and how intense it will become.

Section B

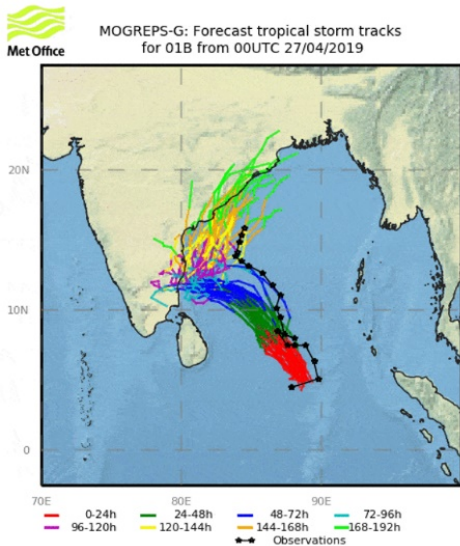
The United Nations World Food Programme (WFP) Automatic Disaster Analysis and Mappings system – A.D.A.M. – produces the first automated response that provides information about nearby centres that could support people who will be affected.

6. With reference to **Source A** in the Resource booklet:

- a. What is the **measured** wind speed of the cyclone on the map? (1)
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- b. When is the wind speed of the storm forecast to exceed 185km/h? (2)
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- c. How is short -term aid likely to be distributed by the WFP from their nearest depot, and what might make delivering it difficult? (3)
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Section C

Fani proves to be a difficult cyclone for meteorologists to forecast, and the models produce lots of different tracks that the cyclone could take in the coming days, almost all of them to



far West of the actual path of the storm. This creates a lot of **uncertainty** both in terms of **where** the storm will go, and how **strong** it will become.

Five days after their first analysis the WFP and the European **Emergency Response Coordination Centre** (ERCC) produces several maps showing the updated situation, including where aid resources are located, and the level of rainfall and storm surge expected (**Sources B & C** in the resource booklet).

By now the storm is less than 24 hours away from the coast of India and is expected to make landfall in the province of **Odisha** , near the city of **Puri** , then head inland towards **Bangladesh** .

7. With reference to **Source B** :

- a. Which nearby countries have the largest stores of WFP resources to respond to the needs of populations affected by the cyclone? (Hint: warehouses) (2)
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Section D

Within 72 hours of the cyclone passing over Puri, Satellites had imaged the area to assess damage. Within another 48 hours, damage to property and infrastructure (e.g. roads and airports) had been assessed, and maps created and published to help humanitarian responses (**Source D**).

10. With reference to **Source D**, an extract of the damage assessment map of Puri:

a. Describe at three impacts of the cyclone on Puri **(3)**

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b. What might be the immediate needs of the people in Puri affected by the cyclone? **(2)**

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11. With reference to **Source D** and **Source C**:

Describe and explain the location of buildings that were destroyed **(3)**

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Why do you think damage is so uneven? **(2)**

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Describe the humanitarian response – what would have been provided, how, and by whom? **(5)**

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What problems might the humanitarian response encounter? **(2)**

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