



Oxford Cambridge and RSA

**Friday 20 November 2020 – Afternoon**

**GCSE (9–1) Geography B  
(Geography for Enquiring Minds)**

**J384/03** Geographical Exploration

Resource Booklet

**Time allowed: 1 hour 30 minutes**



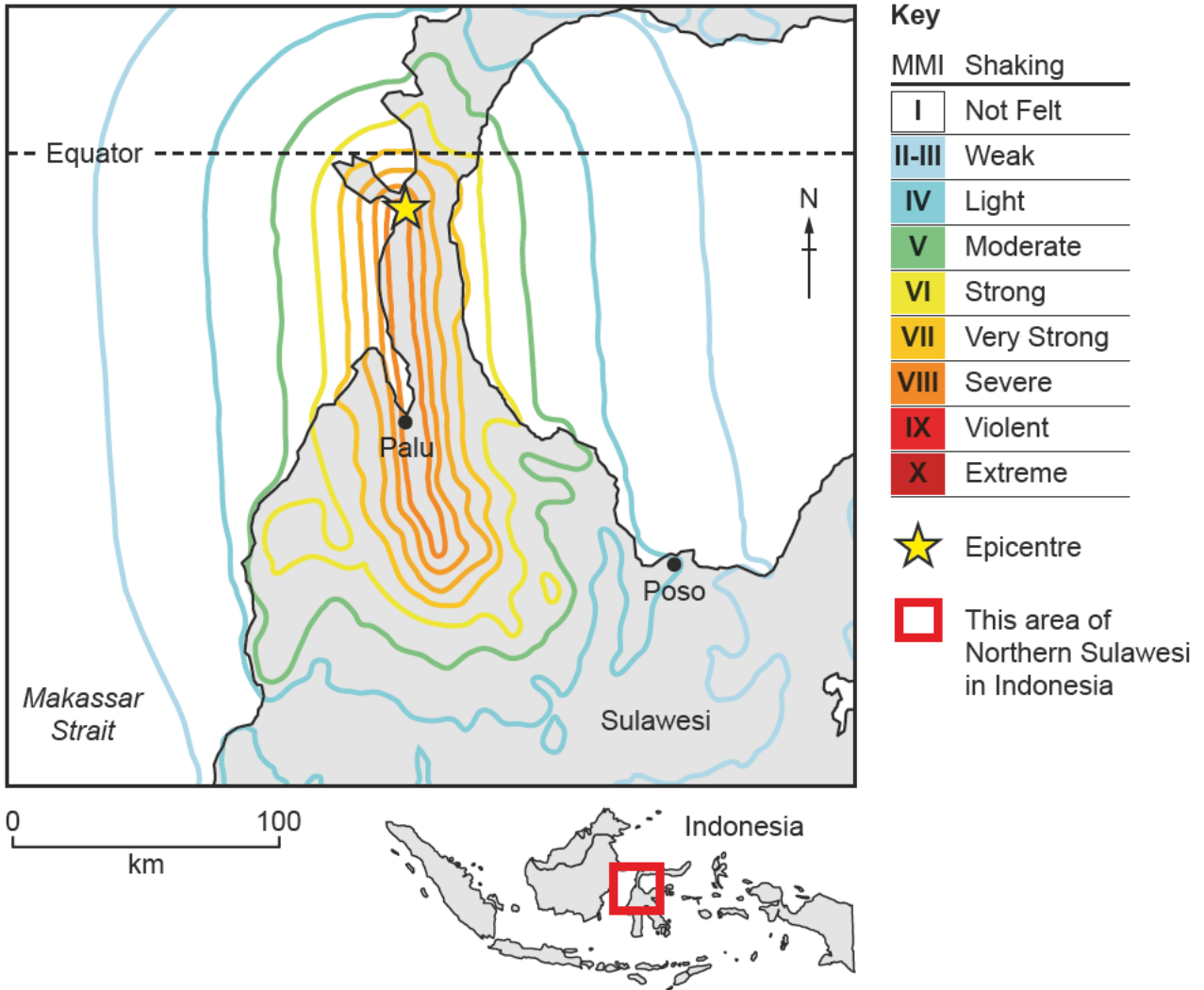
**INSTRUCTIONS**

- Do **not** send this Resource Booklet for marking. Keep it in the centre or recycle it.

**INFORMATION**

- This document has **8** pages.

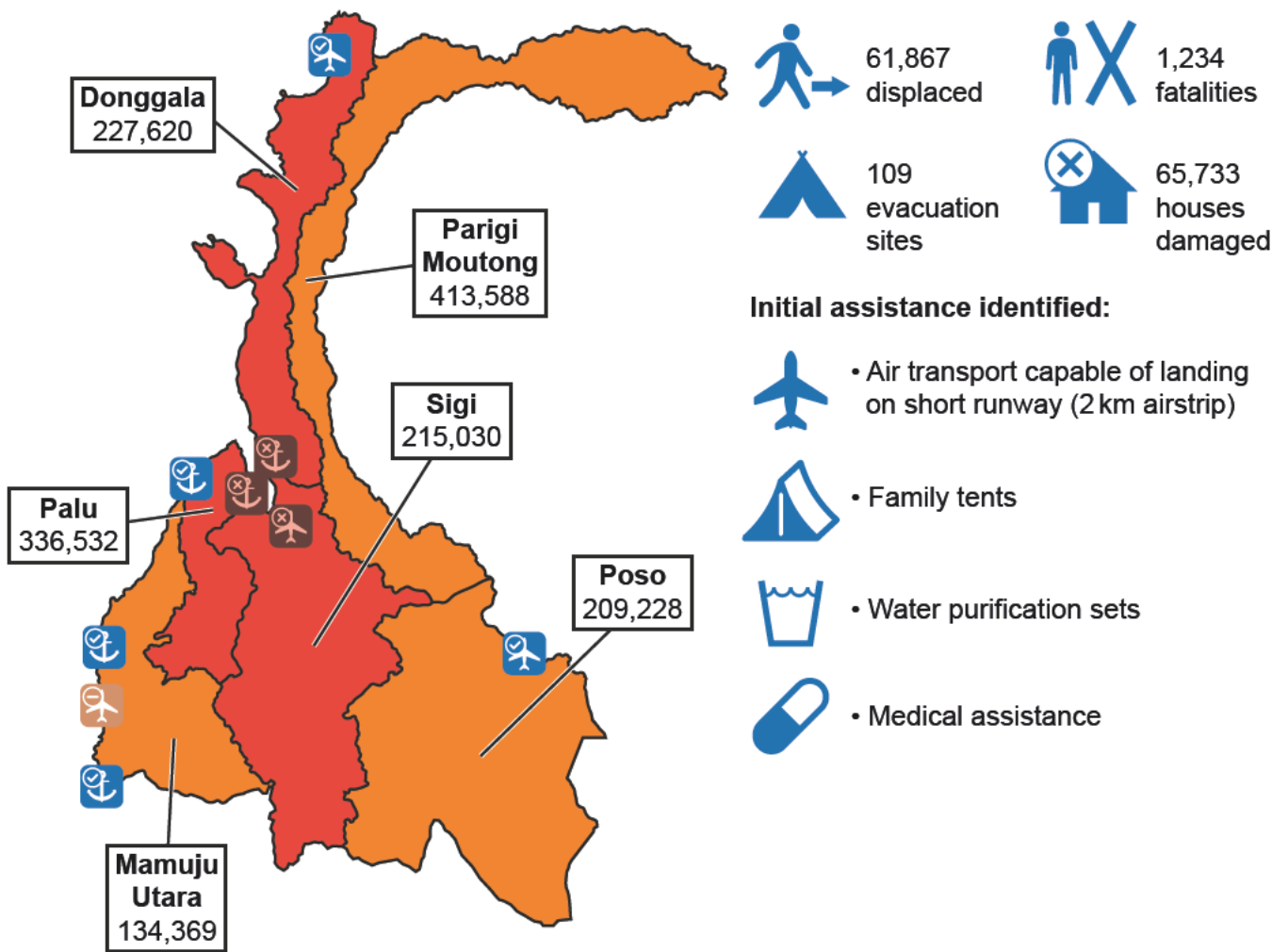
Fig. 1 – Map of Indonesia showing the earthquake on 28<sup>th</sup> September 2018



**Fig. 2 – Tsunami impact map for Northern Sulawesi, Indonesia**

Adapted from 'Potential Disaster Impact: Tsunami of Mw=7.40 in Indonesia' from J R Patton, R Stein, W Sevilgen, 'Tsunami in Sulawesi, Indonesia, triggered by earthquake, landslide, or both', [www.temblor.net](http://www.temblor.net), Temblor, 3 October 2018. This content has been removed due to third party copyright restrictions. Link to material: <https://temblor.net/earthquake-insights/tsunami-in-sulawesi-indonesia-triggered-by-earthquake-landslides-or-both-7825/>

Fig. 3 – Infographic showing the impacts of and responses to the tsunami in Sulawesi, Indonesia



**Key:**

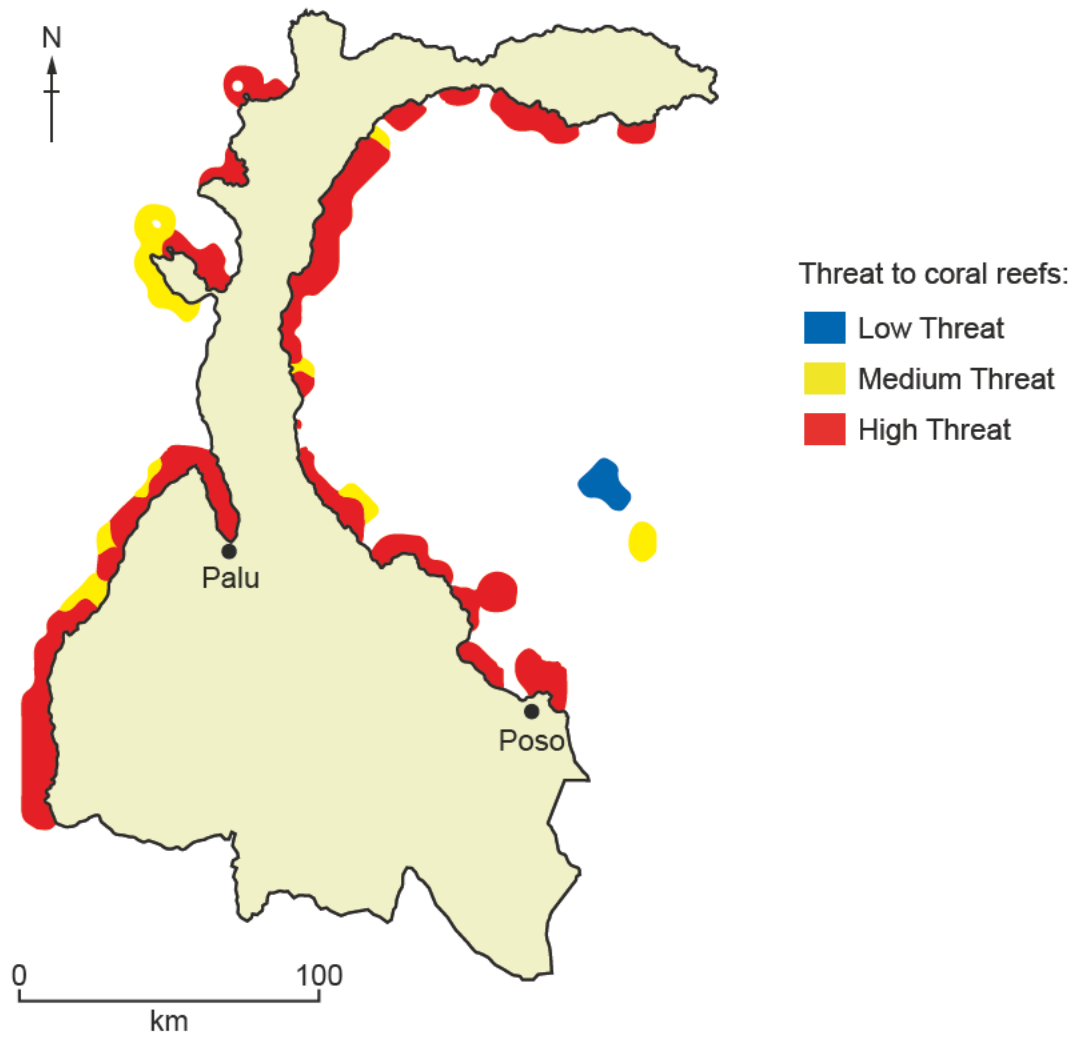
- Badly Affected
- Severely Affected

**Donggala** Region and Population  
227,620

**Airports**  
**Ports**

	<b>Closed</b>		<b>Limited operating capacity</b>		<b>Open</b>

Fig. 4 – Map of Sulawesi, Indonesia, showing the location of and threat to coral reefs



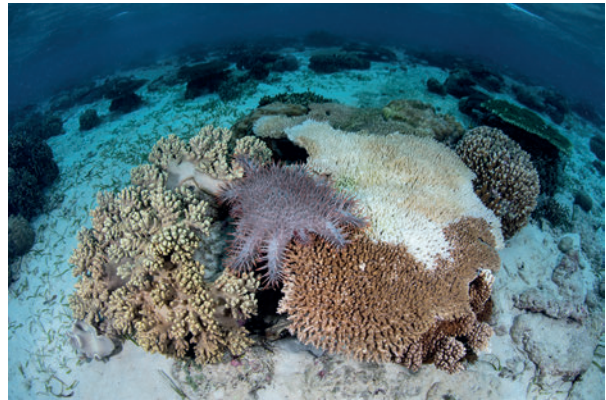
**Fig. 5 – A factfile about uses of coral reefs in Sulawesi, Indonesia**

Sulawesi is surrounded by narrow areas of shallow seas, separated from each other by areas of very deep ocean. This is the perfect environment for coral reefs to form and there are over 2000 km of reefs in the area. Some of the reefs around Sulawesi stretch for hundreds of kilometres without a break.



Northern Sulawesi is known as one of the best diving locations in the world and local people have set up dive resorts for tourists. The majority of dive resorts encourage divers to help to restore and protect the coral, however diving equipment can harm the coral if not used correctly.

The Crown of Thorns starfish is one threat to the coral reef as they eat the coral. In some parts of the seas around Sulawesi, there were up to 30 starfish per diving location.



In 1998, there were reports of widespread coral bleaching in Sulawesi caused by seas becoming warmer. The coral bleaching seems to have reduced, as there is more protection in the area, though this is still a high risk due to climate change.

Fishing is a major part of the economy in Sulawesi with many villages totally reliant on the fishing industry. The fuel from fishing boats and the use of nets that get caught on the coral can cause a lot of damage.



**Fig. 6 – Key statistics tables for the Sulawesi rainforest and the economy of Indonesia**

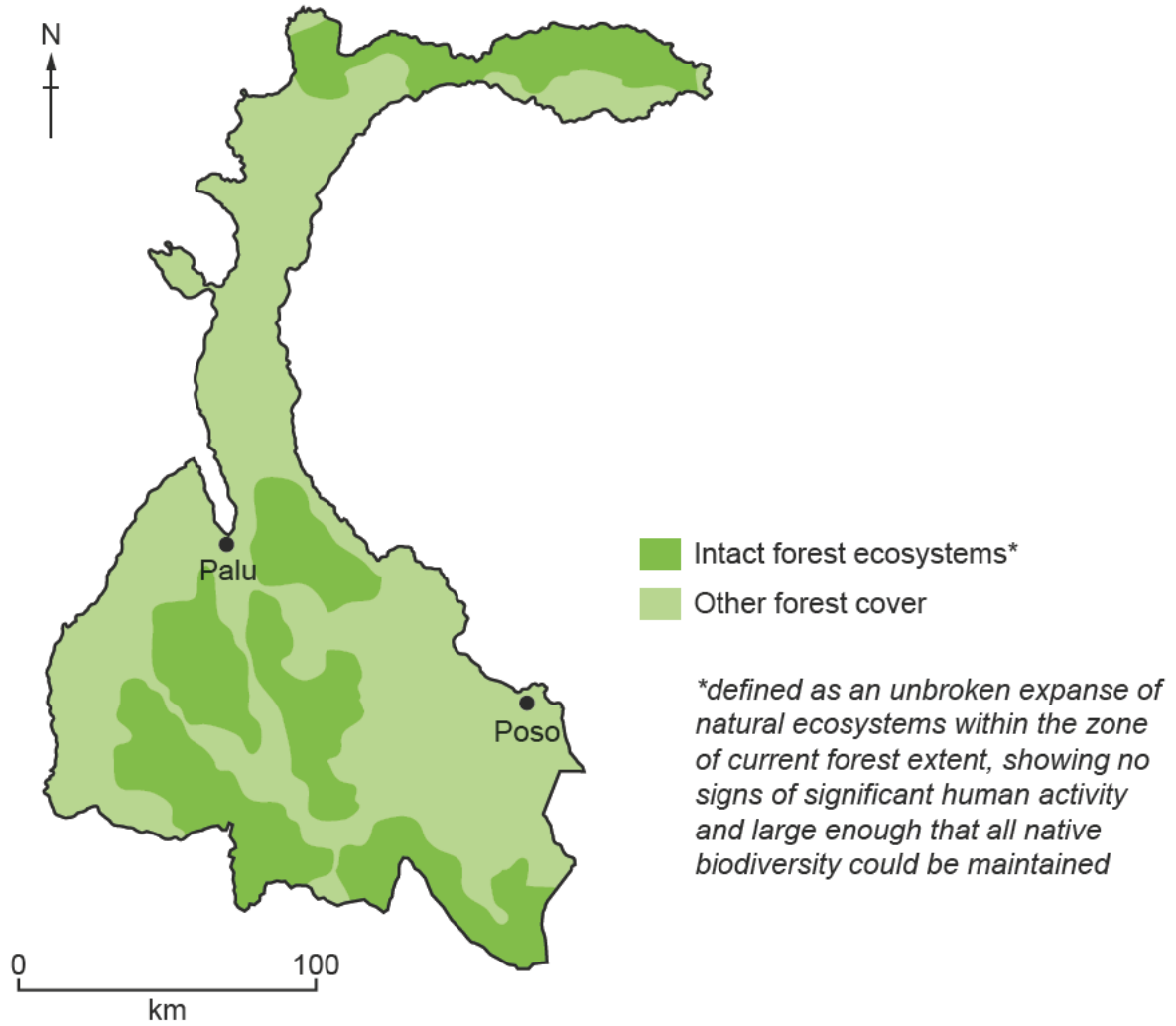
Table A – Sulawesi rainforest coverage in square kilometres (km <sup>2</sup> )	
Total Land Area	174 849 km <sup>2</sup>
Total Tree Coverage in 2000	147 074 km <sup>2</sup>
Total Tree Coverage in 2010	145 451 km <sup>2</sup>
Total Tree Coverage in 2018	136 120 km <sup>2</sup>

Table B – Estimated potential economic value of the Sulawesi rainforest per square kilometre (km <sup>2</sup> )	
Logging	\$6250
Farming	\$3570
Palm Oil Production	\$35 000
Ecotourism	\$5480

Table C – Economy of Indonesia Gross Domestic Product (GDP)	
GDP in 2000	\$165 billion
GDP in 2010	\$755 billion
GDP in 2018	\$1042 billion



Fig. 7 – Tropical rainforest cover in Sulawesi, Indonesia



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