ANDERSON SERANGOON JUNIOR COLLEGE

JC1 H2 Geography Mid-Year Common Test (2023)

H2 GEOGRAPHY **9173/ 01**

5 July 2023

INSERT **2 hrs**

READ THESE INSTRUCTIONS FIRST

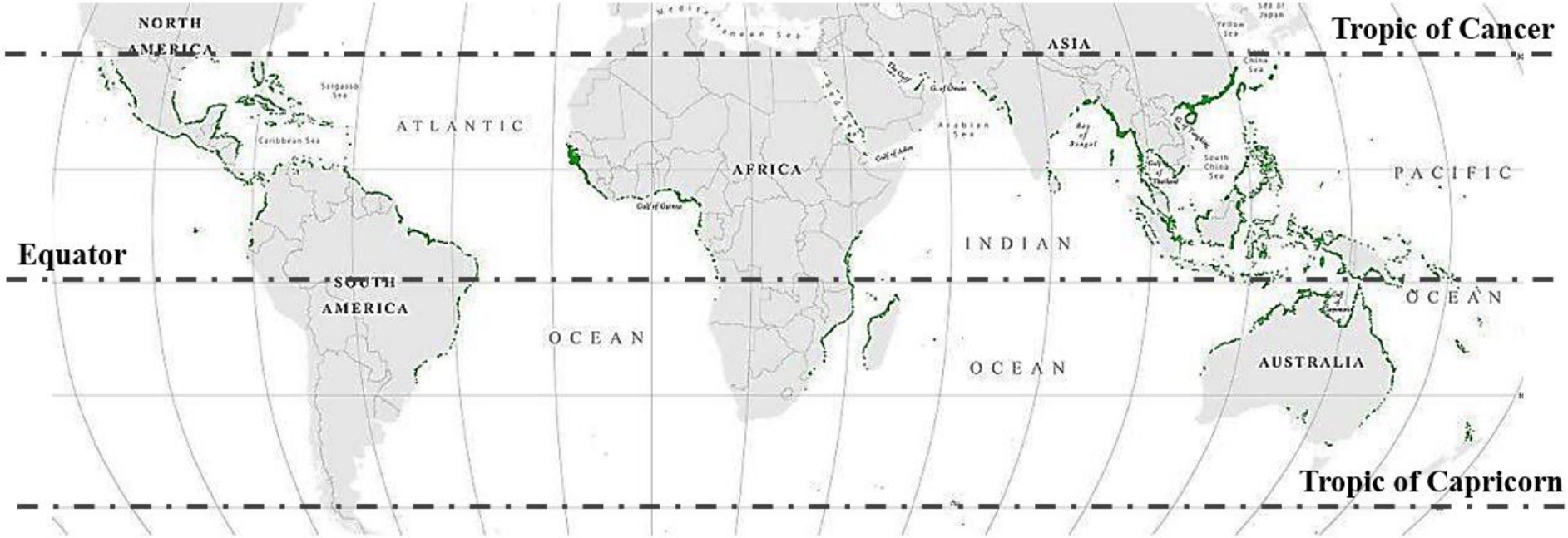
The Insert contains all the Resources referred to in the questions.

Resource 1 for Question 1

The Sustainable Development Goals (SDGs)

Resource 2 for Question 1

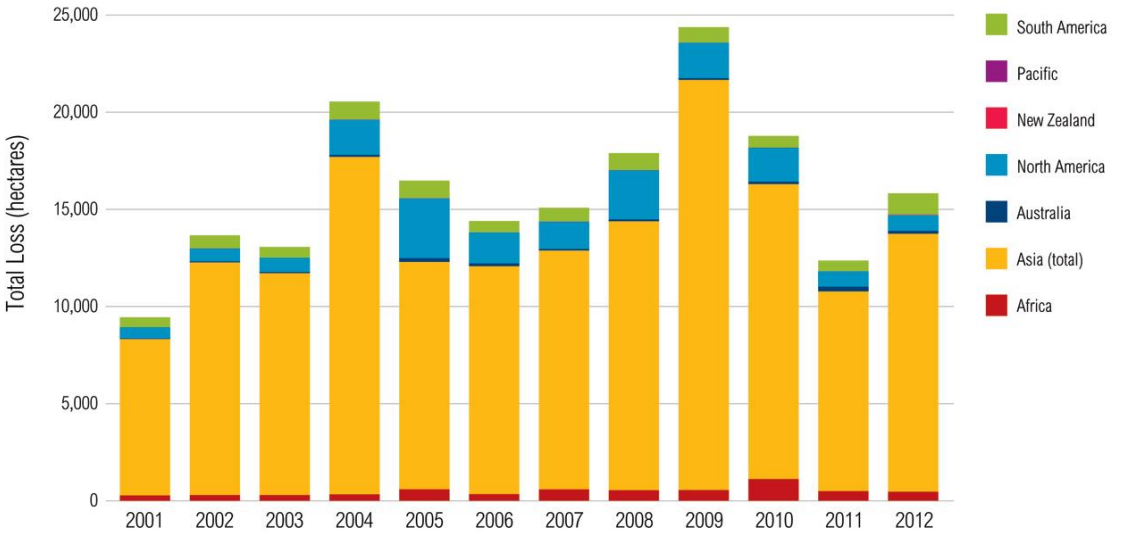
Global distribution of mangroves in 2000



***Note**: Areas in **green** indicate mangroves.*

Resource 3 for Question 1

Tree cover loss in mangroves from 2000 – 2012, by region



Source: http://bit.ly/1ztb5ZI

WORLD RESOURCES INSTITUTE

Resource 4 for Question 1

Article on mangrove loss in Indonesia

Along Indonesia's coastline lies more than 3.3 million hectares of mangrove forests. This accounts for about 23 per cent of all mangrove ecosystems in the world. Out of this, around 600,000 ha of them have been damaged.

However, mangroves have been known to bring many benefits to communities. Mangroves can absorb up to five times more carbon emission than a tree in an upland area. Various studies have shown that mangroves and the soil beneath them can store up to 89 tonnes of carbon per hectare. Mangroves can also withstand large waves and act as a barrier against tsunamis, protecting residents in coastal areas. They can also be processed for consumption or sale, not to mention the potential for ecotourism. Because of its multiple benefits, mangrove restoration has been seen to be highly important in the pursuit of sustainable development, especially in Indonesia.

Nevertheless, many mangroves have been damaged due to natural reasons or human behaviour. World Resources Institute (WRI) Indonesia has found that the biggest contributor to mangrove destruction in Indonesia is the establishment of ponds, as mangroves trees must be cleared to make way for their construction. Other causes of damage to mangroves also include conversion of land for shrimp farms, excessive logging, and the establishment of infrastructure in coastal areas such as reclamation, roads and ports.

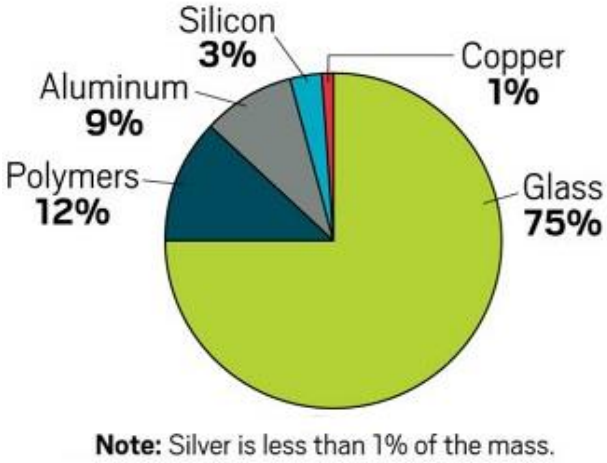
Earlier this year, the Indonesian government set an ambitious target to restore all damaged mangroves by 2024. Despite the level of ambition, though, funding is a real challenge. Due to rising COVID-19 cases which led to budget constraints, the target for 2021 was lowered to 33,000 ha in 32 provinces.

There are also other impediments. For instance, when mangrove areas have been converted to ponds, the authorities cannot simply replant them. They will need to engage the fishermen, who do not necessarily understand the function of mangroves in the replanting process.

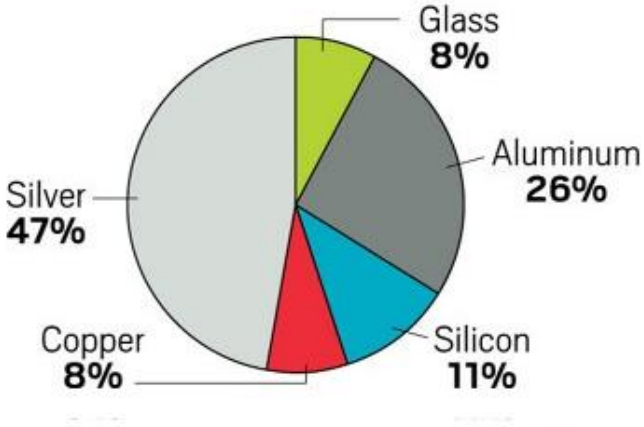
Source: https://www.channelnewsasia.com/asia/indonesia-mangrove-rehabilitation-jokowi-600000-hectares-2024-2306296

Resource 5 for Question 2

Comparison of materials in a typical solar photovoltaic (PV) cell by mass and by value



Distribution of materials by mass

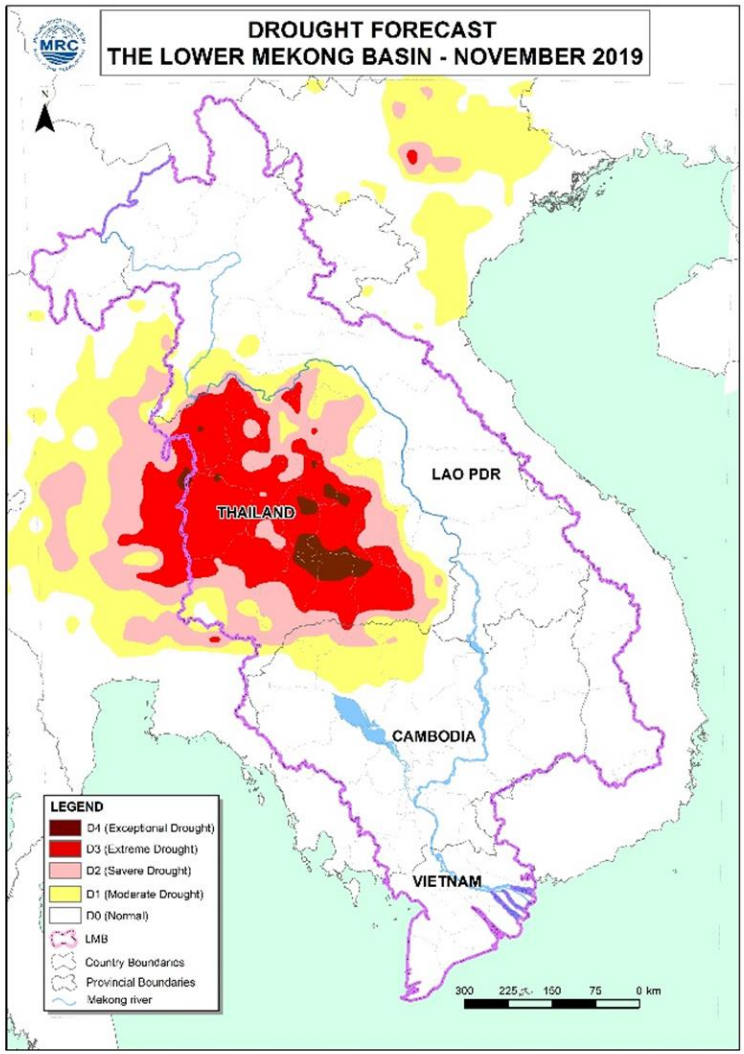


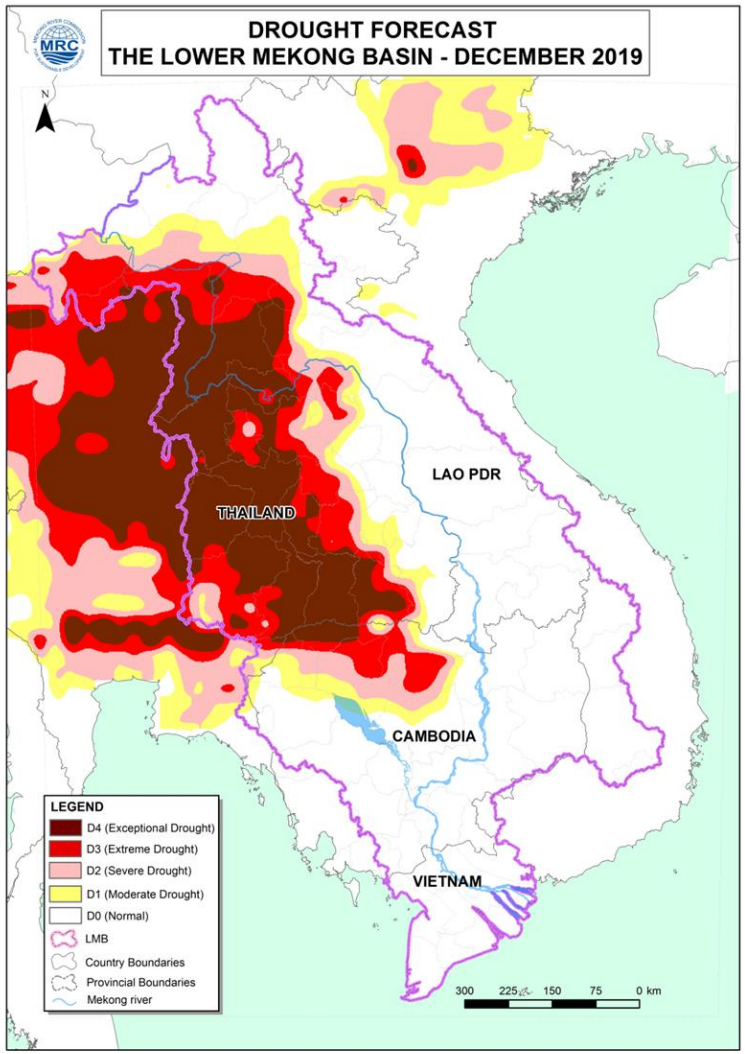
Distribution of materials by value [1]

[1] *Refers to the monetary value of a cell's materials*

Resource 6 for Question 2

Drought forecast maps of the Lower Mekong Basin (LMB) for November and December 2019





Resource 7 for Question 2

Map of Mekong Mainstream Dams

Source: MRC Strategic Environmental Assessment: ICEM, 2010
*Initially proposed as a 3,300 MW project, 465 MW and 2,600 MW options have also been studied.

Resource 8 for Question 2

Dam construction site along the Mekong River in China