

# Introduction to Madagascar



## Geography and Origins

Madagascar is:

- the fourth largest island in the world,
- located some 250 miles off the coast of southern Africa,
- about 1000 miles long and 350 miles at its widest point,
- slightly over 587,000 km<sup>2</sup>, over twice the size of the UK,
- the world's oldest island.

The prehistoric breakup of the supercontinent Gondwana separated the Madagascar-Antarctica-India landmass from the Africa-South America landmass around 135 million years ago. Madagascar later split from India about 88 million years ago. Since that division the island has moved closer to the Africa mainland.

The combination of highly varied geology, isolation and the position of the island in the tropics has allowed plants and animals on the island to evolve in relative isolation.

## Geology and Vegetation Zones



### Madagascar:

- Is in the tropics of the southern hemisphere,
- Has a hot rainy season (November–April) and a relatively cooler dry season (May–October),
- Tropical cyclones frequently cause severe damage to infrastructure and loss of life.
  - The **central highland plateau** is the most densely populated part of the island and is characterized by terraced valleys (producing rice and subsistence crops) among grassy hills and patches of sub-humid forests that formerly covered the highland region.
  - To the **west of the highlands** increasingly arid terrain gradually slopes down to the Mozambique Channel and mangrove swamps along the coast.
  - A narrow and steep escarpment along the **eastern coast** is home to most of the island's remaining tropical lowland forest.
  - Grassy plains with stony outcrops and patches of deciduous forest dominate the **west**
  - The **south** is characterized by desert and spiny forests.
- Around 6% of the land is arable with 1% under permanent crops. 26% is forested.
- Madagascar has only 0.009% of its area as freshwater, the UK has 1.34%.

## People on Madagascar



While there is archaeological evidence of people on the island from nearly 4,000 years ago, human settlement only really began around 2,000 years ago.

- The first people from Borneo by outrigger canoe between 350 BC to AD 550.
- Migrants from Africa arrived around 1000 AD, and they have been joined by many other groups since then.
- The Malagasy have since developed a unique culture and heritage, with about 18 distinct cultural subgroups in different areas of the island.
- It was part of the French empire from around 1900 to 1960, so many of the island's people speak French in addition to Malagasy and both are official languages.
- The island is a constitutional democracy ruled by a President,
- There has been some political instability in recent years.

The population:

- 24 million people now live in Madagascar, but only 5 million just 50 years ago;
- at current rates of population growth there will be 66 million people in 2060.
- Almost half of the people are under 15 years of age.
- Poverty is widespread: 92% of the population live on less than \$2 a day. The average density is 35.2 people per square km, but huge areas are very sparsely populated. The UK has a density of 255.6/km<sup>2</sup>.
- Almost half of the population do not have access to clean water.

Education:

- Is free and compulsory from ages 6 to 13 - five years of primary schooling followed by four years at lower secondary and three years at the upper secondary level.
- Schools are crowded and the quality of education is variable.

## General Challenges

- Population
- Education
- Politics
- Economics/ poverty
- Employment
- Food/ diet/ health

## Environmental Challenges

- Habitat destruction
  - Loss of rainforests to agriculture, villages, eucalyptus plantations, logging, mining.
  - Loss of wetlands due to agriculture, pollution, urban expansion.
  - Loss of Spiny Forest to agriculture, grazing,
- Species extinctions
  - Hunting for food or trade
  - Habitat loss so they can no longer find their food and shelter.
  - Disturbance due to logging, village expansion.
  - Eucalyptus monoculture does not support wildlife – leaves not digestible.
- Erosion
  - Soil is often thin, of limited organic matter and on steep slopes.
  - Removal of natural vegetation allows rain to wash soil away
  - Topsoil with nutrients is washed into rivers, down to lowlands and out to sea.
  - Rice cultivation captures soil from uplands for nutrients and use as bricks.
  - Red soil colours rivers and shows far out to sea.
- Alien species
  - Introduced intentionally for agriculture – rice, zebu, coffee, vanilla, sisal.
  - Introduced intentionally for wood production – Eucalyptus, pine.
  - Some of these have since expanded out of cultivated areas – Eucalyptus, pine, sisal.
  - Accidental introduction/escape into wild – Lantana, Giant African Snail.
  - Diseases – Fungal disease of frogs (worldwide)
- Agriculture

Madagascar is one of the world's main suppliers of vanilla and cloves, while coffee, lychees and shrimp are also important agriculturally. The country currently provides half of the world's supply of sapphires and produces a number of other precious and semi-precious stones. These all provide much needed income and employment, but there are severe and in some cases devastating impacts on the environment.