## **Great Barrier Reef FAQ**

## **Q:** What makes the Great Barrier Reef so special?

A: It is the world's largest coral reef system, visible from space, and made up of over 3000 reefs and 900 islands. The Reef is one of the greatest natural wonders of the world and biodiversity hotspot.

### Q: Why must we protect the Great Barrier Reef?

A: Not only does the Great Barrier Reef and its connected ecosystems protect our coastline and communities from extreme weather like storm surges, it provides a home for over 9000 species of corals and marine animals, including endangered sea turtles and dugongs. The Reef's tourism industry generates \$6 billion annually and supports 64,000 jobs in the region.

## Q: What is the biggest threat to the Great Barrier Reef?

A: Climate change has the most widespread negative impact on coral reef ecosystems. Climate change is causing devastating consequences for iconic coral reefs, seagrass, other habitats and marine animals.

## Q: What causes climate change?

A: Mining and burning fossil fuels releases carbon pollution into the air, trapping heat in our atmosphere and heating our oceans.

## Q: How is climate change impacting our oceans?

A: Climate change is rapidly changing our oceans. The ocean absorbs around 90% of excess heat from carbon pollution and this is causing more frequent, and severe marine heatwaves, coral bleaching, extreme weather events, sea level rise, melting ice sheets, and ocean acidification.

#### Q: What are corals?

A: A coral is a colony made up of tiny, clear, jellyfish-like animals called polyps. Many of these animals have limestone skeletons, which build up over millennia to form coral reefs. Corals get most of their bright colours from microscopic algae called zooxanthellae. Healthy corals can also be brown and beige.

### Q: What is coral bleaching?

A: When sea surface temperatures stay too hot for too long, corals become stressed and expel the colourful algae living inside their tissues, causing them to turn pale, fluorescent, or white.

#### Q: Is bleached coral dead?

A: Bleached corals are not dead, but are at increased risk of starvation, disease and death. Extended bleaching may result in coral death, after which corals turn dark grey as they become covered with algae.

#### Q: Can bleached coral recover?

A: Yes - but it needs time and favourable conditions. Coral reefs can take decades to fully recover from a bleaching event. Climate change is causing more frequent, intense, and longer marine heatwaves, giving coral reefs less time to recover.

## Q: Are back-to-back mass bleaching events normal?

A: No. The oceans keep breaking the hottest ocean temperatures on record. The Great Barrier Reef has endured five mass bleaching events since 2016 - a scale and severity of bleaching never recorded before on the Reef.

## Q: Does coral bleaching affect the entire Reef equally?

A: No - bleaching affects corals in different ways. The number of corals bleached, severity of bleaching, and survival rate vary throughout the Reef, depending on the duration and temperature of the heat stress, as well as species, depth, and other factors.

# Q: I heard the Reef bounced back quickly after bleaching events?

A: Some fast-growing coral species have been recorded growing back quickly after bleaching events, but overall the Reef is experiencing a loss of biodiversity as many slower-growing species are not able to recover quickly enough due to back-to-back bleaching events.

## Q: How is the tourism industry helping to protect the Reef?

A: By creating opportunities for people to see the beauty of the Reef, and create unforgettable memories, tourism operators are educating people about the Reef and helping raise awareness about threats and solutions. The tourism industry is also heavily involved in coral restoration efforts and research programs.

#### Q: What is the outlook for the reef?

A: Scientists tell us that if we don't stop burning fossil fuels, coral bleaching will become an annual occurrence by the 2040s or even sooner, meaning corals won't have any time to recover. This will spell disaster for our Reef and 64,000 people who depend on it for their livelihoods. It is not too late to make changes and give the Reef a bright and healthy future, if we act now!

## Q: What actions can I take to help protect the Great Barrier Reef?

A: There are many actions you can take, including volunteering, signing petitions, donating to Reef conservation efforts, moving your money into banks and super funds that don't invest in fossil fuels, and voting for people with strong climate policies. It can be as simple as having a conversation with your family and friends about climate change and inspiring them to see the Great Barrier Reef.