

CONSERVATION SCIENCE WITH DR MOLLY GRACE

TALKING POINTS

COMPREHENSION

1. What are the main differences between the IUCN Red List and IUCN Green Status?
2. Why are gray whales classified as 'Least Concern' on the IUCN Red List?
3. What criteria go into assessing a species' Green Status, and why is each important?
4. Why did Molly work with so many different scientists from different countries to develop the Green Status?

APPLICATION

5. What research do you think would need to be undertaken to understand whether a species is fulfilling its ecological function?

ANALYSIS

6. Species' populations can be affected by invasive species, natural disasters (such as volcanos, earthquakes, or hurricanes), and climate change. Which of these do you think the IUCN team would classify as 'major human impacts'? Why?
7. What other activities would you classify as 'major human impacts' on species?
8. Thinking about historical context, why do you think past conservation efforts often did not account for the needs of local communities?

EVALUATION

9. The IUCN Green Status is considered a new part of the IUCN Red List rather than a replacement for it. Why do you think this is?
10. How do you think Molly's team should prioritise which species are assessed for IUCN Green Status next?

CREATIVITY

11. Some people believe gray whales are now at their maximum population size, given the marine environment has changed considerably since pre-whaling times. How would you design a study to support or challenge this? Think about fieldwork, lab studies, and computer modelling.

ACTIVITIES YOU CAN DO AT HOME OR IN THE CLASSROOM

Look at the three graphs for the gray whale. Copy out the axes and labels and use the internet to plot graphs for the following species:

- Giant panda (*Ailuropoda melanoleuca*)
 - Saltwater crocodile (*Crocodylus porosus*)
 - Caley's grevillea (*Grevillea caleyi*)
 - Brown rat (*Rattus norvegicus*)
 - Spix's macaw (*Cyanopsitta spixii*)
- You should be able to find (at least approximate) population trends over time for each online.
 - The IUCN Red List criteria for each species, including changes in categorisation in the past, can be found by typing the species name into www.iucnredlist.org/search
 - Use the information you have learned from Molly's article and your research to roughly predict what Green Status would be assigned to each species through time. Use www.iucnredlist.org/assessment/measuring-recovery-green-status-species to help you.

Once you have plotted your graphs, consider the following things:

- What extra information would have been useful?
- What difficulties did you come across? How could they be overcome?
- What do you think your results mean for conservationists?
- Compare your graphs to a classmate. What led to differences in your graphs?

MORE RESOURCES

- The *Conservation Optimism* movement shines a light on conservation success stories: conservationoptimism.org
- The IUCN's *Commission on Education and Communication* has a range of resources available, including educational guides and comic books: www.iucn.org/commissions/commission-education-and-communication/resources
- This video explains more about why the IUCN Red List is useful: www.youtube.com/watch?v=VukyqMajAOU