

Today's Engineering Challenge

Here is a photo taken by a satellite of the delta of the Huang He River (also known as the Yellow River) where it enters the Bohai Sea off the coast of China.

- Can you see the river channel and its delta? Point both out to someone else in your group and explain how you knew.

Deltas act as a protective barrier for the land behind it, protecting the land from large waves that crash on shore during big storms.



Image courtesy of NASA Earth Observatory (<http://earthobservatory.nasa.gov/IOTD/view.php?id=42439>)

The circled area on the map contains many oil and gas wells that the Chinese would like to protect from wave erosion.

- If you were an engineer, how would you go about protecting these oil and gas fields from wave erosion? You could have an unlimited budget and all ideas should be considered. However, the engineering solution that would cost the least money and involve the least effort to do will be the most likely to be funded by the oil and gas company.

Brainstorm ideas with your group, then come to a consensus about the idea that you think will work the best.

- Explain your solution to the problem of protecting the oil and gas field using both words and pictures.