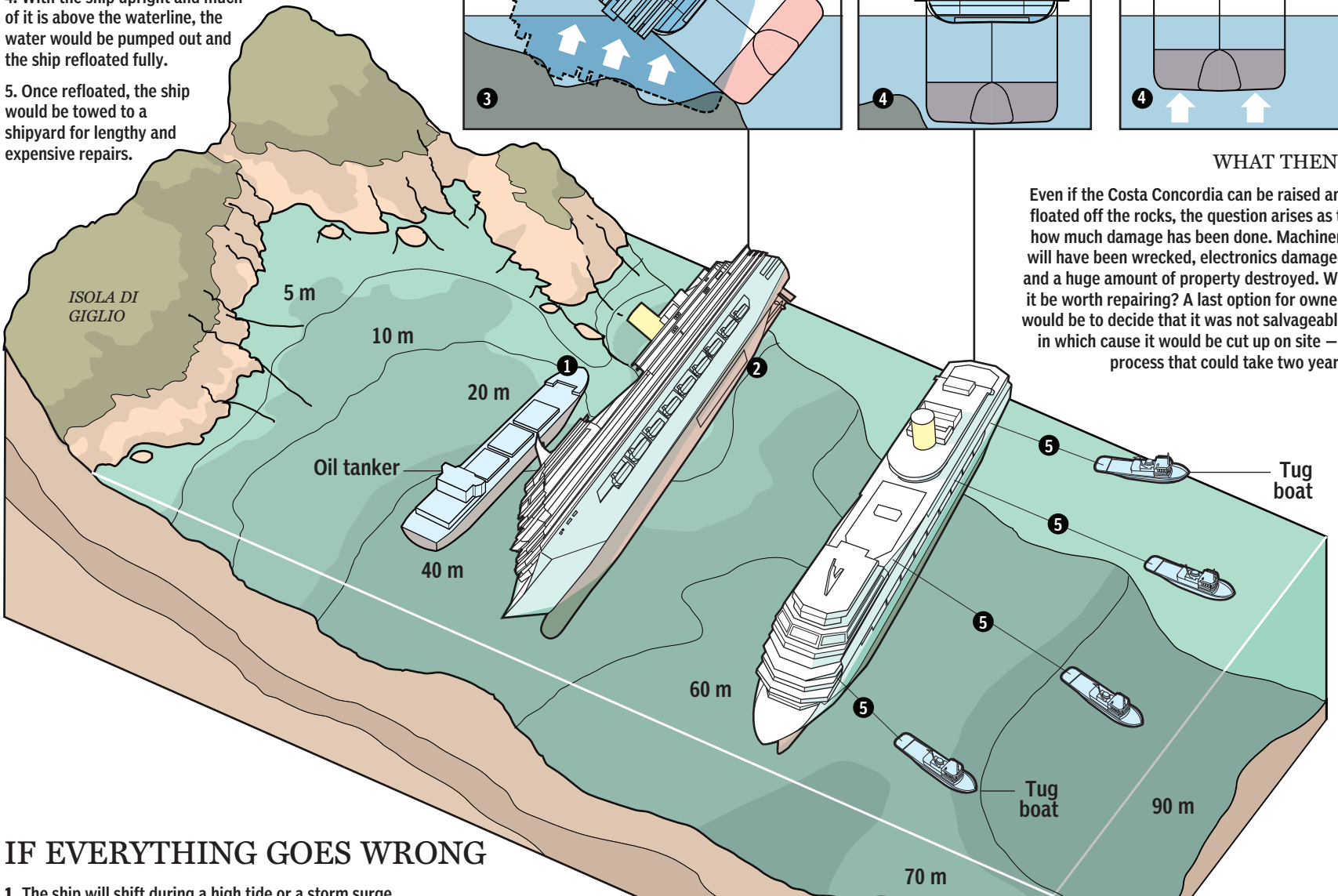
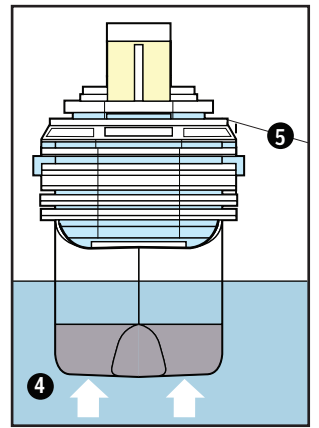
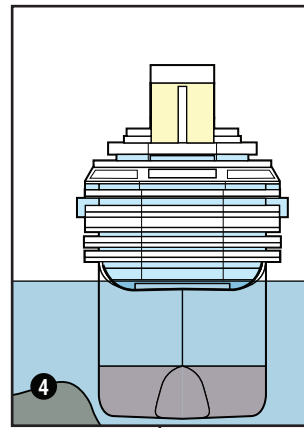
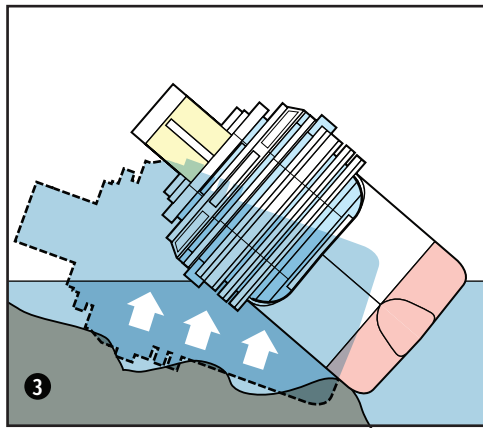


# CAN WE SAVE THE CONCORDIA?

The 114,500-tonne cruise ship is perched precariously on rocks. Nautical engineers Smit International are studying to see if the ship can be floated off and repaired. But the danger is that the ship could slip further down the rocks, plummeting 100 metres and sparking an ecological disaster if its oil tanks rupture. Smit Int. was previously involved in salvaging the *Herald of Free Enterprise* in 1987 and the Russian submarine *Kursk* in 2000.

## IF EVERYTHING GOES RIGHT

- Over the next few weeks all of the 2,400 tonnes of fuel oil will be pumped out of the ship onto barges. None of the 17 fuel tanks has ruptured so far. Pumping fuel from the cruise liner is a daunting task, but oil engineers say that as long as no leaks spring, the process should be seamless.
- A patch will be placed over the tear in the hull of the ship.
- Air bags will be placed beneath the hull and water pumps will gradually pump the sea water out.
- With the ship upright and much of it is above the waterline, the water would be pumped out and the ship refloated fully.
- Once refloated, the ship would be towed to a shipyard for lengthy and expensive repairs.

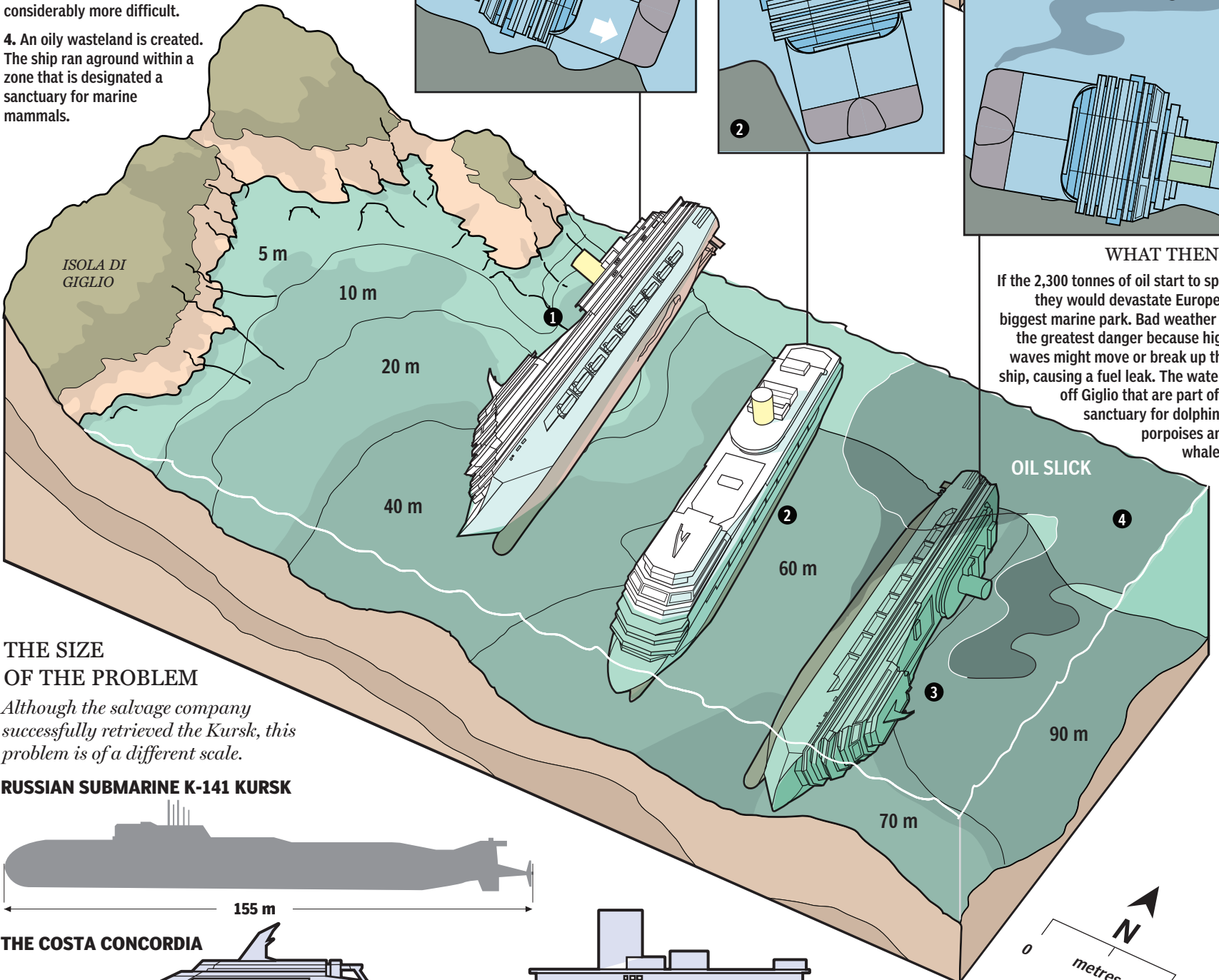
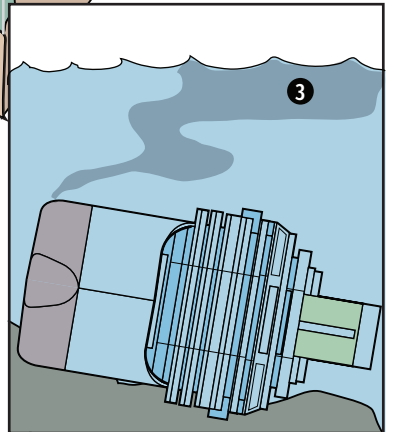
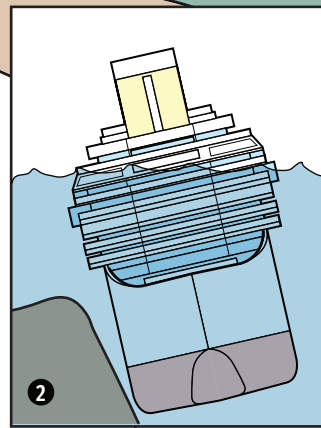
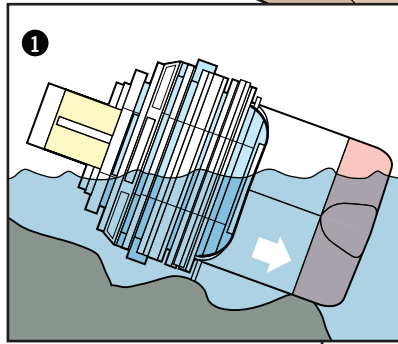


### WHAT THEN?

Even if the *Costa Concordia* can be raised and floated off the rocks, the question arises as to how much damage has been done. Machinery will have been wrecked, electronics damaged, and a huge amount of property destroyed. Will it be worth repairing? A last option for owners would be to decide that it was not salvageable, in which case it would be cut up on site – a process that could take two years.

## IF EVERYTHING GOES WRONG

- The ship will shift during a high tide or a storm surge. Yesterday it reportedly moved 9cm. When the ship shifts it will slide over the edge of a 70-metre drop.
- The force of momentum will carry the 114,500-tonne ship deep under water.
- Oil will begin to seep out of the hull and poison the immediate environment and make the salvage operation, fuel removal and body recovery considerably more difficult.
- An oily wasteland is created. The ship ran aground within a zone that is designated a sanctuary for marine mammals.



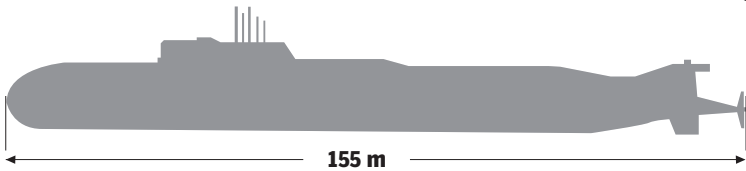
### WHAT THEN?

If the 2,300 tonnes of oil start to spill they would devastate Europe's biggest marine park. Bad weather is the greatest danger because high waves might move or break up the ship, causing a fuel leak. The waters off Giglio that are part of a sanctuary for dolphins, porpoises and whales.

## THE SIZE OF THE PROBLEM

Although the salvage company successfully retrieved the *Kursk*, this problem is of a different scale.

### RUSSIAN SUBMARINE K-141 KURSK



### THE COSTA CONCORDIA

