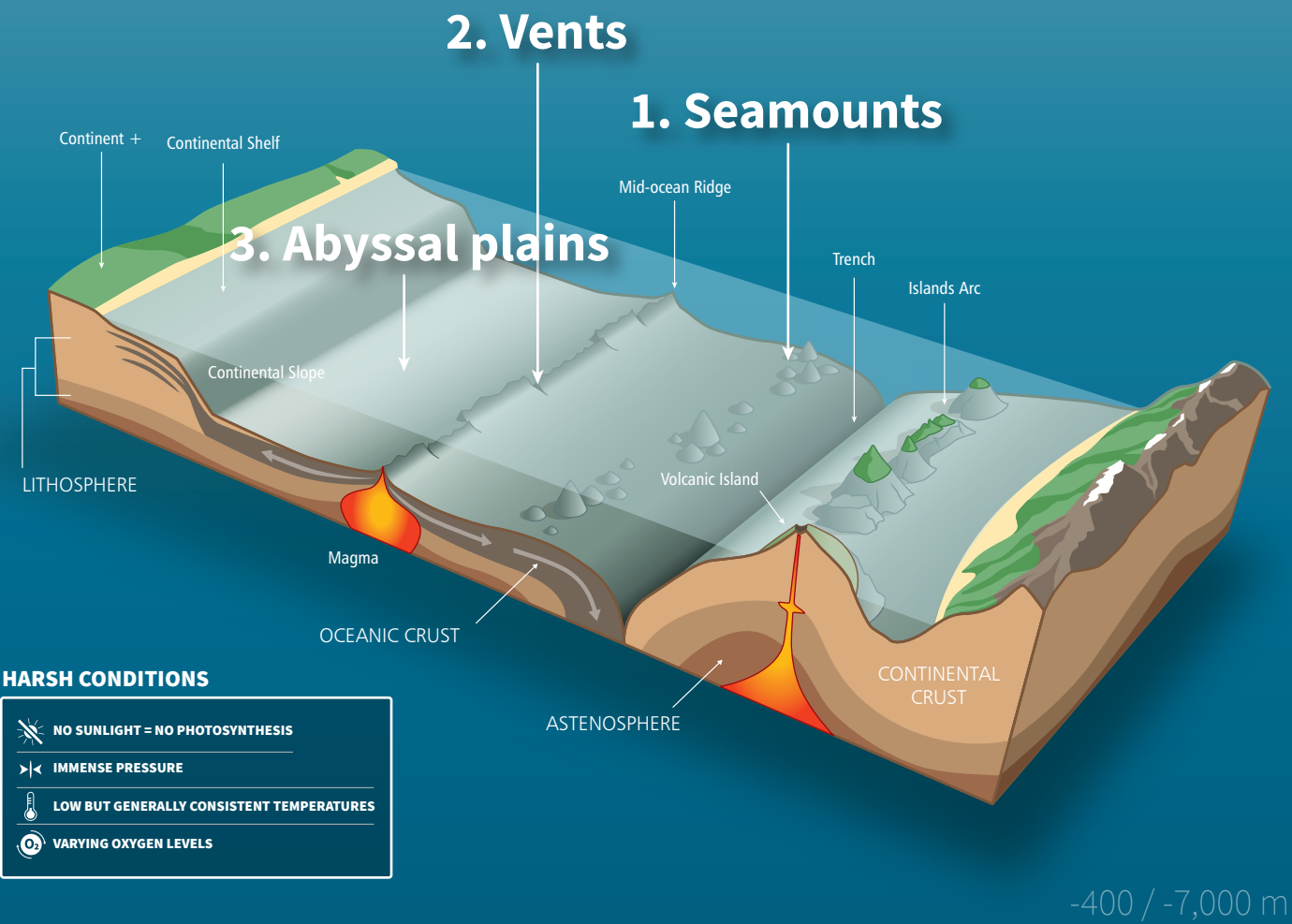


Deep Sea Mining

What ecosystems will it affect?



3 main types of ecosystems
where deep sea mining is under consideration



1 Seamounts

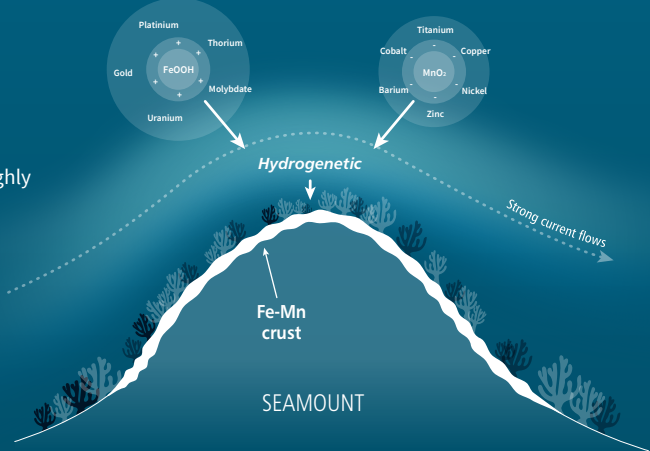
 MINERAL TYPE FOUND HERE
Polymetallic (ferromanganese) crusts

FORMATION
Seamounts are undersea mountains rising from the seafloor formed by volcanic activity. They create currents and variation in depth that leads to abundant and highly endemic biodiversity. Ferromanganese crusts form on crusts because of the conditions of upwelling and turbulent mixing along the flanks and summits of seamounts, forming over millions of years.


-  **800** SPECIES OF FISH | **VERY HIGH LEVELS OF ENDEMICISM**
-  **STRONG OCEAN CURRENT**
leads to upwelling of nutrient-rich water and therefore high levels of biodiversity

SOME EXAMPLES OF BIODIVERSITY

-  CORALS
-  SPONGES
-  SPIDER CRABS
-  BRITTLE STARS
-  MOLLUSCS



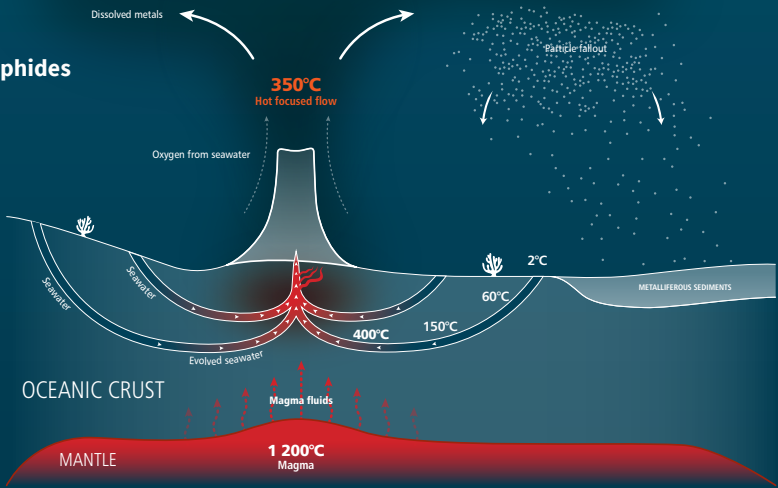
2 Hydrothermal vents

 MINERAL TYPE FOUND HERE
Polymetallic sulphides aka seafloor massive sulphides


FORMATION
Water heated under the seabed by volcanic activity escapes through fissures in the seabed floor, leading to hydrothermal vents. These are mostly found at active plate boundaries like oceanic ridges and volcanic island sites. Since there is no sunlight at this depth, the animal communities use the chemicals in the hot waters from the vents as the basis of their food chain. This leads to highly endemic species at these sites.

SOME EXAMPLES OF BIODIVERSITY

-  TUBE WORMS
-  SHRIMPS
-  YETI CRABS



3 Abyssal plains

 MINERAL TYPE FOUND HERE
Polymetallic nodules aka ferromanganese nodules

FORMATION
Nodules are formed when dissolved metal compounds precipitate around a small nucleus, for example some debris or a fossilised bone. Growth is concentric and extremely slow, ranging from 1 to a few hundred millimetres per million years.

SOME EXAMPLES OF BIODIVERSITY

-  ANGLERFISH
-  GULPER EEL
-  POLYCHAETE WORM
-  BACTERIA
-  BRITTLE STARS

