

# OCEAN HEALTH IS OUR WEALTH

There have been suggestions that the impacts of deep sea mining might be very small, and that there is very little life in the deep ocean that will be affected. We would like to add more information on what the impacts of mining our deep seabed might be.

## 1. WHY THE RUSH?

We are being influenced, and rushed, too much by outsiders, including mining companies, investors, and developed countries. We need to think carefully about who will really benefit from this industry. If there are benefits, we want to make sure they come back to the people of the Cook Islands. We need to ensure the best possible decisions are being made for us.

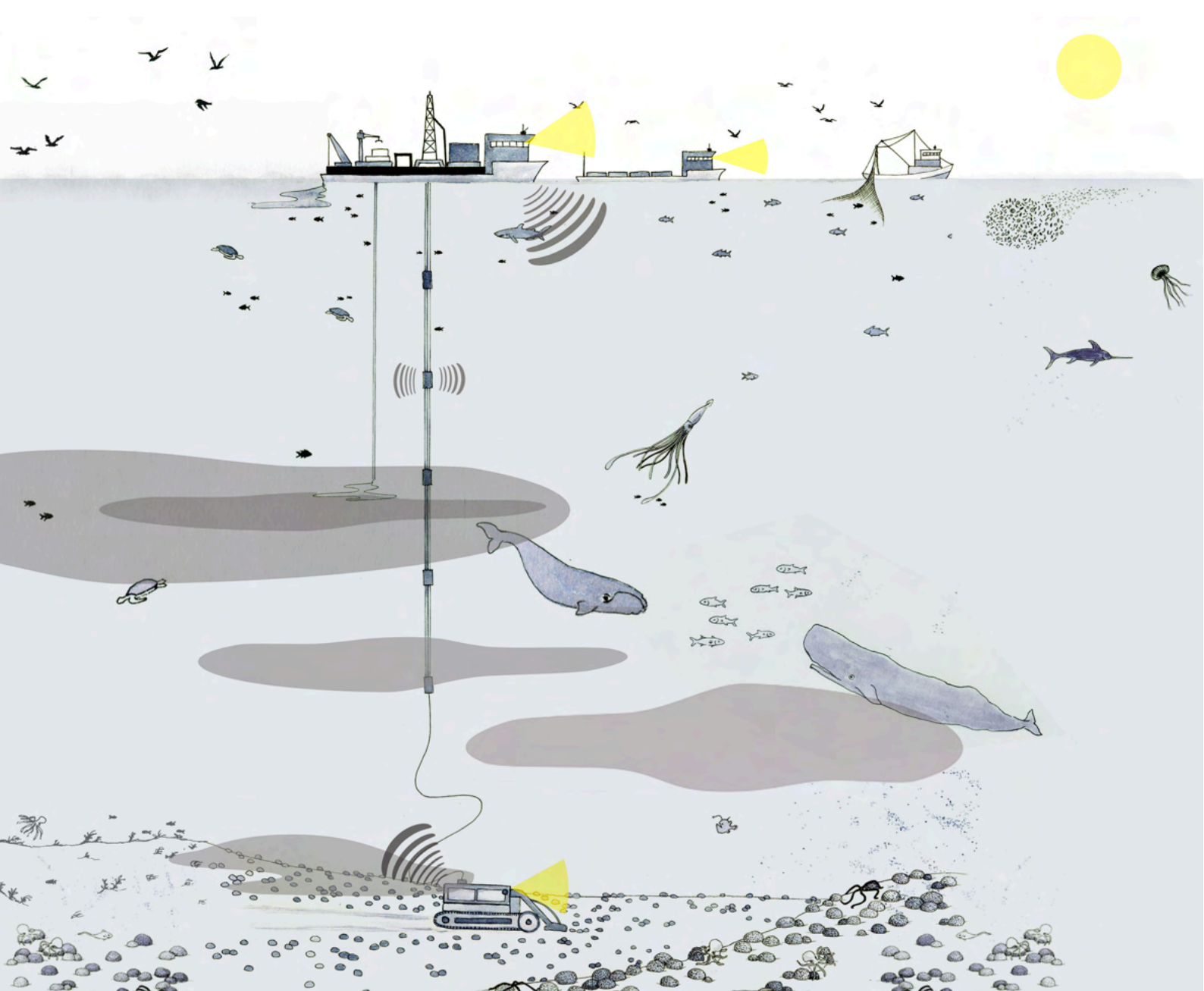
ABOVE: AN AERIAL VIEW OF AITUTAKI. SOURCE: ANDREA IZZOTTI/ADOBESTOCK

## 2. OUR RIGHTS TO FREE, PRIOR & INFORMED CONSENT

We must take time to build the capacity of local Cook Islanders to better understand deep sea biology, engineering, environmental impacts and financial benefits associated with this industry. Then we can better comprehend the good and the bad parts of getting involved before allowing commercial mining to begin. This will take time. We should not be putting our ocean at risk by pushing ahead until we have all the information we need to make good decisions.

OPPOSITE: FOR CENTURIES COOK ISLANDERS HAVE USED TRADITIONAL KNOWLEDGE, TO READ THEIR ENVIRONMENT AND PROVIDE FOOD FOR THEIR FAMILIES AND NATURE HAS PROVIDED, RAROTONGA, COOK ISLANDS. SOURCE: CHAMELEONSEYE/SHUTTERSTOCK





### **3. THERE IS MUCH MORE THAT WE NEED TO KNOW ABOUT DEEP SEA MINING**

We hear that nodule mining is basically picking up potato-sized rocks off the seabed and bringing them to the surface. But how does this happen? There is much more to mining than this. These rocks will be sucked up by machines which stir muddy sediment to create "plumes". Trapped in those sediment plumes are carbon, which may make our ocean more acidic and toxic metals like mercury that could also make the ocean unhealthy for our tuna.

### **4. IMPACTS FROM SEDIMENT PLUMES**

Sediment plumes could travel long distances from the mining site, even up to 100km away, or more. The sediment will likely smother animals swimming or drifting in the water and will cover animals sitting on the seabed. Therefore, the impact of mining will affect an area much larger than just on the seabed where the mining is done.

IMAGE ABOVE: PROCESS OF NODULE MINING WILL CREATE SEDIMENT PLUMES IMPACTING MARINE LIFE AND THE HEALTH OF OUR OCEANS. ILLUSTRATION BY NICKY JENNER/FFI





THE PATANIA II NODULE COLLECTOR IS LAUNCHED FROM MARINE VESSEL NORMAND ENERGY, DOCUMENTED FROM THE RAINBOW WARRIOR IN THE PACIFIC.  
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A BRITTLE STAR SEEN IN A FIELD OF MANGANESE NODULES. IMAGE: DJ AMON & CR SMITH, UNIVERSITY OF HAWAII. BELOW: LIGHT AND NOISE ASSOCIATED WITH NODULE MINING OPERATIONS COMBINED WITH THE DISCHARGE OF MINE WASTE IN MID OR SURFACE WATERS COULD PROVOKE A TIPPING POINT FOR YELLOW FIN TUNA MIGRATIONS THAT NEITHER WOULD ON THEIR OWN. SOURCE: TUNAPACIFIC.ORG



## 5. IMPACTS ON MARINE LIFE

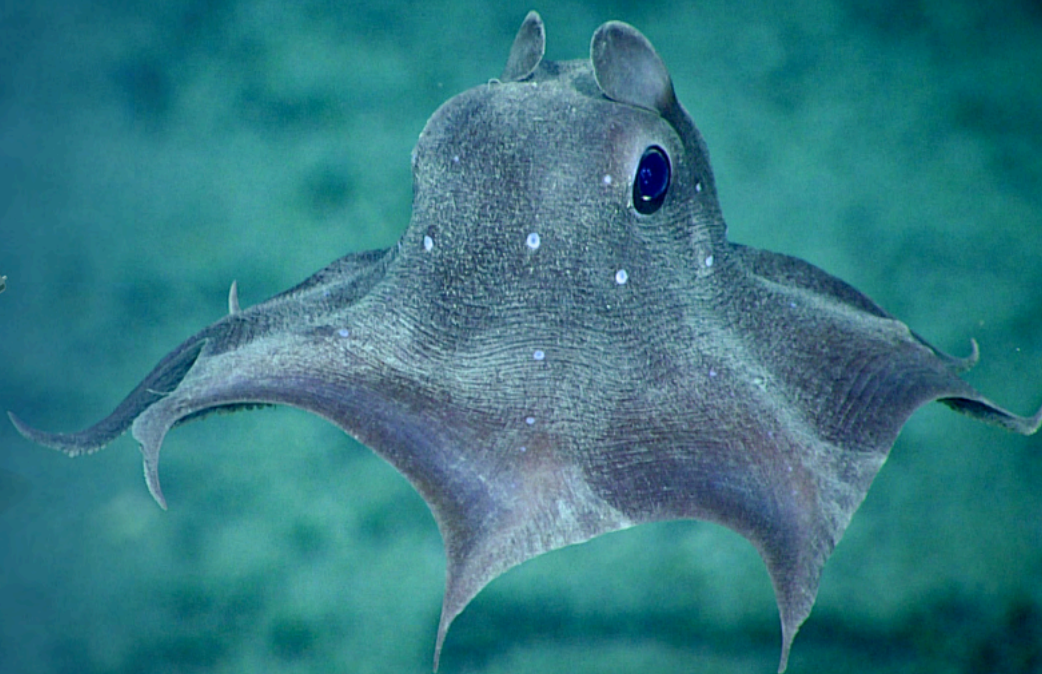
Even if it was true that there isn't much large marine life in the deep sea, there are millions of other tiny organisms that live there, including bacteria. We need to take time to study the role they may play in keeping our ocean and planet healthy before we start to destroy them and their homes with mining.

## 6. IMPACTS ON THE HEALTH OF OUR OCEANS

What animals will be impacted? We do not know. Some of these small animals we might destroy could be vitally important in the future for medicines and cures for things like cancer. For example, bacteria from the deep sea are reported to be used in COVID testing and treatment. Many more could be important for our health and that of our ocean and planet.

## 7. IMPACTS ON OUR HEALTH AND FOOD

There will also be another sediment plume created when the nodules are washed on the ship and the washing water is pumped back into the ocean. Although this plume will be released down deep, it could still spread over a large area as it drifts around. Any poisons that were trapped in that sediment can then get into the food our fish eat. For example, mercury is already very high in our ocean fish, and this could make it worse.



## 8. NOT A SOLUTION TO CLIMATE CHANGE

New battery technologies are already being developed that do not require the metals from mining nodules. The world is also encouraging recycling to protect the planet from mining while addressing climate change. This gives us an opportunity to avoid impacts on our ocean while also adopting renewable energy and identifying alternative ways to develop our economy.

## 9. PROTECT OUR OCEANS FOR THE FUTURE

We need to remember that the ocean is already under a lot of pressure from climate change, pollution and overfishing. Mining would add to this pressure.

LEFT: RESEARCH SUGGESTS THAT A TRANSITION TOWARDS A 100% RENEWABLE ENERGY SUPPLY CAN TAKE PLACE WITHOUT DEEP-SEA MINING. FURTHERMORE, MINING THE DEEP IS LIKELY TO UNDERMINE THE RECYCLING AND PRODUCTION INNOVATIONS REQUIRED FOR CLEAN-ENERGY TRANSITIONS. ILLUSTRATION: PETOVARGA/ADOBE STOCK. RIGHT: DUMBO OCTOPUS IS CUTE BUT TOUGH, THRIVING IN THE DEEP SEA AS DEEP AS 6KM. SOURCE: NOAA

# WE NEED TO SECURE BLUE WEALTH BY ENSURING A HEALTHY AND PRODUCTIVE MARINE ENVIRONMENT